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**IRAQ**

# ***INMA* QUARTERLY REPORT** **APRIL - JUNE 2008**



**Inma**  
AGRIBUSINESS PROGRAM

The *Inma* Agribusiness Program is made possible by the support of the American people through the United States Agency for International Development (USAID). *Inma* is implemented by a consortium led by the Louis Berger Group, Inc., under Contract No. 267-C-00-07-00500-00.



# *Inma* Agribusiness Program

## Quarterly Report April-June 2008

Please do not circulate this report without due consideration of security issues in Iraq.

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## ACRONYMS AND ABBREVIATIONS

AMIS	Agriculture Market Information System
BDFG	Business Development Funding Group
CERF	Central Emergency Response Fund
CERP	Commanders Emergency Response Program
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
GRE	Graduate Record Exam
ICA	Irrigation Command Areas
ICAP	Iraq Command Areas
ICBG	Iraq Company for Bank Guarantees
NGO	Indigenous Non-Governmental Organization
IIFT	Inma Iraq Field Team
IPM	Integrated Pest Management
IRs	Intermediate Results
IT	Information Technology
JOF	Job Order Facilitator
JOM	Job Order Manager
JOS	Job Order System
LOP	Life of Project
LTTA	Long Term Technical Assistance
M&E	Monitoring and Evaluation
MIS	Market Information System
MND-SE	Multinational Division-Southeast
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
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
VCA	Value Chain Analysis
VSP	Veterinary Service Provider
YAO	Youth Activity Organization

# GENERAL INFORMATION

***This report covers the 4<sup>th</sup> Quarter (April-June 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 in the approved Performance Monitoring Plan (PMP).***

Project Name:	<i>Inma</i> Agribusiness Program
Project Objective:	The purpose of this contract 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 Don Henry, Deputy Chief of Party - Operations 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. The Louis Berger Group, Inc. has submitted a request to USAID for approval to exercise the options authorized under Contract Section F.2 for extension of the Period of Performance of the *Inma* Agribusiness Program two years from April 30, 2010, to April 30, 2012.

# INTRODUCTION

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. The NED Program approach is to stimulate economic growth to provide greater opportunities for the people of Iraq to engage in normal economic and social behavior, creating a climate for peace and stability. The Louis Berger Group, Inc.'s Consortium was chosen to implement the *Inma* Agribusiness Program – a contract in support of USAID's Strategic Objective 8: Private Sector Economic Opportunities Expanded and, in particular, Intermediate Results 8.2: Increased Private Sector Agribusiness Development.

In the past, agriculture and agribusiness in Iraq supported over 25% of the population. Iraq's agricultural sector was once able to satisfy a large portion of the country's food needs but has declined because of wars, misguided policies, and economic sanctions. As a result, Iraq's productivity of cereal and high-value crops is reduced to a fraction of what it used to be. Through the *Inma* Agribusiness Program, Iraq can revitalize its agricultural sector. *Inma* is supporting the commercial operation of agribusiness in the areas of processing, marketing, and distribution of value added products. The principal areas of concentration will be in three commodity sectors:

- Annual Horticulture
- Perennial Horticulture
- Livestock and Feed

These are referred to as **value chain sectors** because there are a number independent industries that *Inma* will be strengthening that add value to each sector. Activities in each of the three value chain sectors will be implemented by a specialized team led by a senior technical manager, responsible for developing and implementing projects designed to make the value chain sectors more competitive.

During the first year, the *Inma* Work Plan is focused on agribusiness development activities, demonstrations of improved marketing and market-responsive production oriented practices to increase value-added in current production within targeted product sectors. The *Inma* Team is working towards gaining the confidence of the private sector. The success of *Inma* is contingent on building solid Iraqi partnerships with private sector actors to both implement activities and to become development partners. Private sector partners are expected to become major drivers and champions of specific anchor and ancillary enterprises within sectors and along targeted product value chains. These partners may include private business entrepreneurs, producers' associations, farmer-owned businesses, traders' associations and other indigenous institutions.

Grants to Loans – During the first three quarters of program implementation, *Inma* gained both experience and knowledge about constraints affecting agribusiness development and success. It has become clear that investing in agribusiness is constrained by the absence of lending institutions serving agribusiness financing needs, and by lack of adequate financing responsive to agribusiness opportunities. In order to provide assistance in this area, *Inma* will undertake an agribusiness financing support

program using grant funds to assist private banks to develop capacity and expand their capital base for specialized agribusiness lending. A Request for Expressions of Interest, issued in March to all private banks operating in Iraq, will be followed by a Request For Application (RFA) for a Grants to Loans (GTL) Agribusiness Credit activity. The GTL activity will, through grants, establish appropriate agribusiness lending capacities, and augment resources available, within selected private bank partners to finance commercial agribusiness capital investments and working capital.

A Microfinance Program through International and Iraqi Micro-Finance Institutions (MFI).

This activity will provide short-term loans of less than \$100,000 that will be oriented to providing seasonal credit for such uses as inputs, operational funds, or small value purchases. These loans usually will not have collateral as a requirement. Funds available for MFI will be approximately \$5,000,000 in the first phase and an additional \$5,000,000 in the optional two years for the *Inma* Program. Short-term (less than 18 months) loans of up to \$100,000 will be considered under this program. Agreement with participating MFIs will be in accordance with USAID regulations. The amounts above represent only funds available for loans. The cost of operating these programs is additional. Estimated costs of operating the GTL and MFI activities, including the optional two years is \$7,000,000 for the full four years. This cost includes a full time *Inma* GTL Activity Manager, a Sub-Contractor to provide loan application assistance, bank capacity building and loan management oversight, as well as costs of operations for MFIs providing micro-finance support. Total estimated funding is \$67,000,000. It is estimated that these activities will inject a total of \$72,500,000 in additional financial resources made available to Iraqi agribusinesses and farmers (if one assumes a 25% match by Banks for these loans).

PRT and ePRT as Local Partners – During the first two quarters of program implementation, *Inma* focused on Job Order applications from various groups and cooperating partners to identify project activities. Projects identified for further review and design through the Job Order System included: Balad Canning Factory; Taji/Abu Ghraib Vegetable Project; Anbar Mushroom Factory; Babil Feed Mill; Euphrates Fish Farm; Qada Packing Sheds Project; Summer Feed Grains (Maize) Project,; and the Winter Feed Grains (Wheat and Barley) Project. In the third quarter, and as anticipated in the program implementation plan and the first year annual work plan, this “reactive” approach was being phased down in favor of a more “proactive”, systemic approach based on Value Chain Analysis results and on recognition that higher program impacts can be achieved through a geographic area focus. As a result, activity interventions are more comprehensive and include a number of activities that together make synergistic contributions towards employment and income generation, and increased stability.

# VALUE CHAIN SECTORS

## PERENNIAL HORTICULTURE

Perennial agriculture in Iraq is characterized by deciduous orchards, such as apples and walnuts in the northernmost areas, shifting into pomegranates, stone fruits, grapes and figs centrally, transitioning quickly into predominantly date production that stretches centrally on to the southern region of Iraq – occupying over 200,000 hectares.

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 add to the value of the crop and the profitability of value sector.

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 production of potentially lucrative crops, such as stone fruits, table grapes, citrus, apples, figs and berries, primarily for the domestic market, at least until production can competitively meet quality standards suitable for export.

### 4<sup>th</sup> Quarter (April-June 2008) Developments

#### Dates

Inma's analyses over the quarter of conditions and prospects for Iraq's date industry suggest that initial projections for date industry revival were too optimistic. Inma completed major studies, analyses, and consultations with date industry leaders along with meetings with traders in Dubai. A Date Workshop is scheduled to take place in Erbil 18th-20th July with the presence of Dubai traders and 25-30 major Iraqi players in the industry. The event will provide a venue to communicate Inma analysis on the date sector and to gather suggestions on Inma date revitalization strategy. The conference will review the market research findings and develop a realistic program for the date sector, including pre and post harvest technical assistances along with the development and expansion of domestic and export market opportunities. The workshop will provide a forum to exchange information and facilitate contacts and future information exchange should private investors wish to move forward with investment in the date sector.

Date production and processing in Iraq is currently a "low value added" activity. Price at farm gates range from \$220 to \$280/MT occasionally higher for top quality grades. Demand for dates in the market is very erratic. The price is sometime as low as \$120/MT and the product is used for animal feed. Big packers act as traders in the market. They normally buy at \$220/MT and sell to wholesalers at around \$330/340MT. Their operational costs for basic processing, transportation and storage are around \$80-90/MT with an operational profit of \$30/MT. Part of the production is currently exported

to UAE (Dubai) and then re-exported mainly to India. India is the only growing market for dates in the world (average +15% annually) but it is characterized by an unsophisticated demand in terms of varieties, standards and packaging. India is a low value market based on volume (almost 300.000MT) with a low price and a few powerful buyers. Currently, India buys most of its dates from traders in Dubai. Iraqi growers currently receive a low price from India since they heavily depend on many layers of intermediaries. Inma role is to reorganize the supply chain allowing the Iraqi players to have more direct access to key Dubai traders (currently buying in the open market) or Indian importers.

The current opportunities for Iraqi dates farmers, processors and exporters in order to add value lie mainly in the following areas:

- Export of quality table dates to Europe and USA;
- Export of added value more sophisticated packaging to UAE.

### **Date Syrup**

The future of the Iraqi date industry largely depends on the identification of new demand for high value date products. Date syrup is a very high value derivative. It is currently sold at a wholesaler price of a minimum of \$3.0/kg (\$3,000/ton) with an input of low grade dates bought at \$300/ton. Date syrup is widely consumed in Iraq (although not always available in the retail market). It is used most during breakfast of Iraqi consumers (especially in winter time). The product has high household penetration in Iraq. Average annual consumption of date syrup is around 2.5kg/par capita. More importantly, Iraq demographics show a huge and growing percentage of young people. This factor could have a dramatic influence on the demand for products such as dibis (date syrup). Although Iraq has only 26 million people, almost 10.5 million of them are aged 14 and younger.

Currently the supply of date syrup is totally disrupted. Factories producing date syrup in Iraq rely on old and outdated equipment and can not function because of the lack of electricity. Current packaging is outdated and unattractive. There is no suitable packaging for consumption away from home and no effort to increase the market for young consumers. Development of new consumer markets and packaging for date syrup could expand the market for dates in the market. An increase in date syrup consumption could represent an additional \$40-50/MT for the farmers and possibly \$1.500/ton for the processors. Date Syrup may in principle follow the pattern of other products which establish themselves in the market as high volume consumption "spreads" (peanuts butter in USA, Nutella in Europe).

Inma strategy aims at promoting date syrup consumption through:

- The introduction to the market of more attractive packaging, increased quality, improved taste, better looking product.
- The identification of new formulations for date syrup (new added ingredients) and targeting young consumers (core target children 3-12 years old).
- The identification of various forms of packaging suitable for consumption away from home (snack).

- Promotion, via advertising and packaging, of a new image for the daily use of date syrup, associated to sport and healthy energy.

## Pomegranate

*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 G.C.C., E.U. and Asian markets will be able to develop the market for Iraq pomegranates. The objectives of the *Inma* program are the following:

- To set a precedent, showing Iraqi pomegranate farmers export market feasibility;
- To identify product requirements in Dubai in terms of varieties, sizes, product characteristics, phytosanitary requirements, packaging specifications, documentation, logistic and to disseminate among Iraqi growers the quality standards required in order to create an export market;
- To assess the profitability of the operation and identify areas of cost savings for the next season;
- To develop and establish a positive image for Iraqi produce on world market.

*Inma* team has identified an agent/buyer in Dubai during their trip to U.A.E. to develop a pilot export test based in Sulamaniyah where reportedly 12.000MT of pomegranate are grown and harvested annually. *Inma* will establish a base in Sulaymanyah for the export pilot test of pomegranate with the objective of sourcing fresh fruit, processing, packaging and exporting to the Dubai market. An implementing partner will be appointed by August.

## 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 the Annual Work Plan matrix.

Major Activities –

- Increase gross sales of dates and other perennial
  - Identified buyers for dates and pomegranate in Dubai ready to place orders provided products requirements are matched
- Partner Outreach.
  - Establish informal Dates Board with representative of 5 areas (Basrah, Baghdad, Kerbala, Babil, Wassit). Dates Conference as a first informal meeting
  - Identified two partners for export pilot test of pomegranate in Sulaymaniya
  - Identified partner for date syrup product improvement

## Marketing and Related Development --

- 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
- Identify and contract implementing partner to conduct a value chain analysis of date sector and other perennial fruit, specifically pomegranates.
  - Value chain completed
- Identify areas of focus, both in dates and in fruits.
  - Major production areas of focus, both in dates and in fruits identified.
  - Selected focus area of Halabja for pomegranate
- Determine baseline and Monitor project assisted value chain for results of activities.
  - Initial partners selected and baseline for dates and pomegranate completed
- Develop a system to track value chain analysis in major target areas.
  - System developed to track value chain income changes.
- Conduct a full marketing study to determine quality requirements, phyto-sanitary requirements, prices, marketing channels, buyers, and traders for domestic and export markets. Develop implementation plan for improving date production and marketing. (Also LOP benchmark).
  - Completed for dates and pomegranate
- Subcontract a partner to conduct and upgrade a periodic marketing study for both dates and fruits including export markets.
  - Periodical marketing study will be conducted by Inma via import traders meetings in Dubai and India
- Implementing Partner selected, initial format of pricing data determined and media selected for delivery of pricing information.
  - Completed
- A selected implementing partner will develop multiple plans to facilitate the export of dates and date products to international buyers. Subcontract partner to develop a plan.
- Strategy focuses on match making between selected traders (by Inma) and selected Iraqi exporters identified both for dates and pomegranate

## Development of New Products and Value Added Services –

- Define marketing grades and standards.
  - **Marketing grades and standards developed according to traders indications and market (export) requirements**
- Identify date products that will add value to Iraqi dates and other perennial.
  - **Identified dates syrup (flavors, new packaging), aseptic juice and pomegranate arils**
- Develop a range of products to meet demand of buyers and sellers.
  - **Under way**
- Identify appropriate packaging technology and source of packaging materials.
  - **Appropriate packaging technology and source of packaging materials identified for pomegranate (arils and aseptic juice) under way for dates syrup**
- Develop/Rehabilitate modern grading, sorting, and packaging plant system.
  - **Development for pomegranate under way. Strategy for syrup in to transfer vacuum technology and new product development**
- Identify shortfalls in the grading, sorting, and packing system.
  - **Plan for the improvement of grading, sorting, and packing development.**
- Develop Financing opportunities and products for business expansion.
  - **Dates: According to Dates Workshop indication**
- Identify other sources of finance.
  - **In progress**
- Provide training for: increased awareness of phyto - sanitary condition certification requirements, improved sorting and grading system for the development and establishment of quality standards for expanding domestic and international markets, food processing, added value chain analysis, branding, development of business plans, packaging, marketing, and finance.
  - **In progress**
- Develop training for increased pomegranate production :
  - **Pre harvest : in field T.A irrigation improvement, pruning, fertilization program, shading, IPM.**
- Issue subcontract to develop and implement training programs. Inventory and evaluation complete. (Also LOP benchmark).
  - **Under way for pomegranate, completed for dates in manual pollination and IPM**

#### **Procurement and Distribution –**

- Inventory and evaluate current production and processing equipment.
  - **Inventory and evaluation complete.**

- Purchase equipment required. Commence purchase of equipment. (Also LOP benchmark).
  - **Started for packaging (carton boxes) and nets**
- Conduct an Assessment of existing infrastructure, equipment, and capacities for harvesting, processing, and storage processes for date and other perennial fruit.
  - Assessment completed
  - Assessment in progress (pomegranates)
- Contract implementing partner to survey and report the status of project assisted equipment.
  - **Not started**

#### Production, Reproduction, and Harvesting –

- Assess current production practices and develop a plan for improving production.
  - **Assessment completed for dates. Under way for pomegranate according to new expert indications**
- Issue a subcontract to implementing partner to assess current production practices.
  - **Not started (pomegranate)**
- Implementing partner prepares IPM plan for dates.
  - **Plan completed**
- 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 of sets (vegetative reproduction) from desired varieties on commercial nurseries operated by private sector entrepreneurs and producer associations. Identify techniques and have nursery development work plan in place. (Also LOP benchmark).
  - **Abandoned for dates. Started with pomegranate with import of**
- Through an implementing partner, identify organization or businesses with the capabilities to propagate perennials. Organizations or businesses with capabilities to propagate perennials identified.
  - **Identified two possible partners for pomegranate**
- Improve production through soil analysis guidance of fertilization. Course of action decided for the selected project areas. (Also LOP benchmark).
  - **Not started**
- Identify a process to sample best soil and elicit recommendations to help farmers

improve production.

- **Process to sample/test soil to improve production identified.**
- 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 schedule for performing the training.
  - **Ongoing**

## ANNUAL HORTICULTURE

In 2005, there were over 400,000 hectares of vegetables planted with gross receipts exceeding \$2 billion, with eight primary crops dominating 80% of the area. The value earned per hectare is well below the average value received in neighboring countries. The majority of the crops are planted on very small plots of land in areas or geographic “sectors” that have competitive advantages over less desirable locations. Vegetable production is concentrated in the central and southern provinces with a lesser amount planted in the north.

The bulk of the harvested annual fruits & vegetables are marketed and distributed to local markets in bags or loosely packed on trucks with very little attention given to sorting, grading and packaging for optimum quality standards. Traders along the value chain do not value or understand market value-added opportunities or quality considerations of the principal crops grown.

This sector provides thousands of rural and urban jobs. Growers, traders, packers and vendors provide employment to a significant amount of local rural populations, as well as to many urban workers. There are prospects for expanding employment opportunities, creating better paid jobs and new enterprises in handling, processing and distribution of crops produced and sold throughout the country. Increasing competitiveness of agribusiness enterprises will be achieved by introducing value-added production along the value chain. Value-added products not only will compete with imports but will outperform them in the domestic market for much of the year, given relatively minor changes along the value chain.

*Inma's* basic approach for implementation of this agribusiness sector is a market driven approach to improve competitiveness, foster the increase of grower profits, and thus increase employment in geographic areas that have unique competitive and comparative advantages in production, procurement, processing and distribution of higher quality and quantity of fresh and processed annual horticultural crops.

Markets are the most important factors in determining the success of any fruit, vegetable, or flower agribusiness enterprise. Markets should guide all decisions made by growers, packers, and shippers within the value chain. These decisions range from determining the most marketable crops for production, to deciding how to best deliver quality produce to consumers at a profit, and how to deliver product to the market in a form that results in maximum sales and value added. However, contrary to popular belief, marketing activities to meet market demand does not begin after a crop is produced. Market alternatives need to be considered before planting takes place on the farms.

## 4<sup>th</sup> Quarter (April-June 2008) Developments

**Iron Horse Taji-Abu Ghraib Vegetable Project** – The activity promotes utilization of new varieties of high yielding, hybrid seeds, as well as the introduction of “best practices” in post-harvest handling techniques, processing, and packaging through technical training programs and commercial demonstrations.

Provision of high performance vegetable seed and greenhouse plastic has a three-fold goal: first, to catalyze increased membership in the twelve area Farmers’ Associations and to strengthen their identity as a viable and reliable vehicle for self help; second, to provide a demonstrable increase in regional farm income that will spur further momentum in developing stronger markets and create an environment that encourages conflict reduction; and, finally, as a first step in a three-year strategic plan to identify regional value-added agriculture chains for sustainable production and processing. The Strategic Plan includes local governments and NGO partnerships for additional horticultural production through outreach development, supplying improved crops to support value-added processing efforts, and development of packing plants and facilities leading to value-added marketing opportunities.

During the last quarter, the plan for improved seed varieties and greenhouse installation was completed and approved for funding. During this quarter, seed and plastic sheeting was 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 in mid-January delayed germination and damaged some crops under plastic. However, more seasonable temperatures since have allowed normal growth to resume. A Farmers’ Training Program has been launched, including course work in farm business management, post harvest grading, packaging, and marketing.

**Baghdad Markets: 9 Nissan** – Inma has established a collaborative effort between the Baghdad District Advisory Councils “DAC,” Military, and Baghdad PRTs to intervene in two distinct markets: one wholesale/retail market and one retail-only market. Rehabilitation of these markets will build the demand for the products of small and medium-sized farms as well as promote economic diversification and job generation in the agribusiness sector. The market will also provide an important source of daily commodity price data and market intelligence.

For the “9” Nissan Market (wholesale/retail), *Inma’s* goal is to establish a clean and secure market with modern facilities such as power and cold storage. There will be over 700 new retail produce businesses directly created and, indirectly, over 1,000 jobs in additional service enterprises. An implementation strategy has been designed. Inma is facilitating the establishment of an NGO to manage market operations.

The “9” Nissan Market was constructed at a cost of \$1 million 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.

Renovation work has been in progress since March, led by Inma, and includes inputs by the Baghdad Provincial Reconstruction Team 2 (ePRT), 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.

It is anticipated that demand for fresh fruits and vegetables will increase significantly in the improved market. There soon will be over 700 new retail produce businesses created and, indirectly, additional service enterprises created downstream, employing over 1000 men and women.

In addition, Inma assisted in formation of a private NGO known as the NINMA to manage the market, and to implement food safety management systems for ensuring safety and quality of produce in the Baghdad food chain.

**Hameedyah Mushroom Farm** – An assessment and business plan has been completed. The factory is the only commercial mushroom production facility in Iraq. The target market is primarily within a radius of 100 km of Baghdad. Distribution in that market can reach at least 11 million potential customers. Products will be sold primarily to wholesalers and other key players in these markets. The total capital requirement to restart production is USD 998,287, to be provided from the following sources: (i) \$375,000 in cash from Hameedyah Mushroom Farm, and (ii) \$623,287 in the form of a grant from the *Inma* Agribusiness Program. The Hameedyah funds will be used to provide three months of working capital for salaries and other key expenses such as safety wear, tools, and other materials. The *Inma* funds will be used to secure a four month supply of key inputs, procure equipment to restore the physical plant, and rehabilitate important parts of the production line.

**Qada Packing Sheds** – Current fresh fruit and vegetable packaging facilities in Iraq are inadequate and post-harvest losses are high (up to 40%). The growers generally lack post-harvest skills and technologies and they are required to transport their products to markets located long distances from their farms. Therefore, it is advantageous for local growers to develop packing infrastructure at farm production areas near major market centers such as Baghdad.

The project will demonstrate advanced post harvest handling technologies by establishing five packing sheds at farm production sources in the Baghdad and other governorates. 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.

The project is to be implemented using the contract-grower system. *Inma* will facilitate contracts to minimize farmer and investor risks. Additionally, the packing shed 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.

**Al Tae Greenhouse Enterprise** – In order to provide year-round high quality fresh produce to the Adhamiya and Baghdad markets, this project involves the construction of

six greenhouses (approximately 2781 m<sup>2</sup> with drip irrigation). The initiator of this proposal, Sheik Faiq Al Tae, owns the land on which the greenhouses will be constructed. Furthermore, he has access to the "Army" irrigation canal which provides sufficient water flow. An above ground water tank will be constructed as a backup system in times of limited electricity. During the hours that electricity is generated, the pumps will fill the above ground tanks. The flow of gravity will allow water to proceed to the greenhouses in the event that power cannot be generated. Back-up power will consist of a small generator. Drip irrigation will be used. The markets have already been identified and are currently being supplied with seasonal produce.

The added protection that greenhouses provide will lead to production of higher quality crops that enable local growers to be more competitive against imports, while simultaneously increasing efficiency of water use. It is evident that for the vegetable industry to prosper and grow in Iraq, there is a need to implement current horticulture production best practices. 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 Al-Tae Greenhouses will provide technical training to other greenhouse operators throughout the Rabi/Adhamiya area.

**Balad Canning Factory** -- The Balad Canning Factory is reportedly the second largest food processing factory in Iraq. The factory directly employed both Sunni and Shia, more than 1,100 male and female (15-20%) workers, from all over Balad Qada'a and neighboring Diyala. Indirectly the factory generated demand for inputs and outputs that employed Iraqis from the entire region -- local estimates are ten times the number directly employed, including more than 30 wholesale buyers from Salah ad Din, Baghdad, Diyala, Basra, Hilla, Kirkuk, Kut, and Karbala, and more than 50 wholesale suppliers from Diyala, Salah and Din, Baghdad, Anbar, Babil, Mosul, and Irbil.

Based on the results of an initial factory assessment followed by a more thorough assessment in cooperation with *Inma*, the BCF has (i) developed a plan for revitalizing the major factory production systems (clean water, power, steam, and sewage treatment); (ii) carried out a needs assessment for each of the factory's eleven product lines. The assessment results indicate that the condition of the factory and the cost for revitalization are significantly more than originally estimated, requiring BCF to secure additional support beyond *Inma*. The total estimated assistance requested from *Inma* is \$5,057,631.

The Balad Canning Factory Revitalization Plan calls for a two-phased approach to begin in April 2008. Phase I goal is to establish a solid foundation for subsequent product line start-up and improvement, including revitalization of water, power, and steam systems, as well as related infrastructure. A combined strategy that leverages funding from USAID, as well as the U.S. military has been developed. The Military will support Clean-up, Preparation, and Site Refurbishment (\$97,000) and Water System Treatment Rehabilitation (\$150,000). *Inma* will support Sewerage, Power, and Steam Systems Rehabilitation and provide support for working capital.

Phase II will focus on initial product line startup to provide revenue for future expansion and revitalization. Initial lines to begin operations are a combination of basic products that require minimal inputs, power and steam (in order to generate a business income flow), to be followed as soon as possible by selected agricultural product lines. An engineering assessment on all product lines has been completed and bills of quantity and scopes of work for each have been generated as required to bring them up to optimum production.

## Annual Work Plan Activities Status

In addition to the above highlights, please find below a summary of Inma 3<sup>rd</sup> Quarter program progress in achieving planned Annual Horticulture Sector activities set forth in the Annual Work Plan matrix.

### Major Activity –

- Determine baseline and monitor value of fruit and vegetable sales. Baseline determined and priority crops selected.
  - **Completed**
  
- 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. Subcontractor selected and contract executed.
  - **Inma has determined that Inma Staff are best qualified to complete this task. Task On-Going.**

### Marketing and Related Development –

- Complete description of the annual horticulture value chain. Description of annual Horticulture value chain complete.
  - **Analysis in process**
  
- 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.**
  
- Market information system being developed. Preliminary system up and running.

- **Anka daily price collection system in place. Nation-wide wholesale prices provided daily.**
- Issue subcontract to undertake market assessment. Report issued.
  - **No contracts will be issued; Inma staff are undertaking the assessment and survey.**
- Issue subcontract to undertake assessment of the wholesale market infrastructure. Report issued.
  - **Internal and Military reports are available on all wholesale markets and deemed adequate for project identification and development purposes.**
- Select markets for revitalization demonstration. Select subcontractor and implement improvements in one market. Subcontractor selected and contract executed.
  - **1st market selected; project is being implemented by NINMA (local association). Additional market, Al-Rasheed wholesale Market, identified for rehabilitation to be implemented with a grant to a local association.**
- Select site for first packing shed. Select subcontractor and build packing shed. Subcontractor selected and contract executed.
  - **Site selected. Grantee (Corporation) selected who will build. Engineering plans completed internally by Inma engineer.**
- Develop training program plan and materials. Identify training program partner.
  - **Training program developed.**
- Plan completed and being implemented by Inma staff and contracted trainers.
  - **Develop plan for the creation of an inter-province produce transportation system. Subcontractor selected and begins overall evaluation for the wholesale transportation system.**
- Evaluation complete. Assessment and evaluation completed. Implementation plan under development.
  - **Grantee/Borrower tentatively identified.**
- Develop a business plan and identify sources of capital for a vertically integrated tomato enterprise in Basra.
  - **Feasibility study commences.**

- Business plan completed. Feasibility Study completed. Business Plan completed.
  - **Request for assistance received and on hold until GTL program in place.**
  
- Assist in the selection and training of a management team for a tomato paste factory. Procure the necessary equipment and supplies.
  - **Assist in identifying enterprise management Team. Provide training in business development for management team.**
  
- Balad Canning Factory project under implementation.
  - **Procure the necessary equipment and supplies.**
  
- In process as part of Balad Canning Factory project. Select area for a vertically integrated fruit and vegetable enterprise and conduct feasibility study.
  - **Area selected.**
  
- Taji Area Packing Shed project identified and potential grantee selected.
  - **Feasibility Stud and Business Plan development underway.**

### **Production and Harvesting –**

- Establish baseline of existing production based upon GOI reports. Establish demonstration plots and initiate training. Begin establishing demonstration plots and training initiated.
  - **Demonstration Farms established and training initiated.**
  
- Perform evaluation of current irrigation infrastructure, determine needs, and develop plan for alternative irrigation systems. Selection of irrigation command areas.
  - **Irrigation renovation plans developed.**
  
- Lower Rashidiyah Irrigation System renovation pilot project proposal developed with MoA, Military, Inma, and MWR . Develop a training program and issue subcontract to conduct training. Training program developed. Sub-contract issued.
  - **Underway (carried out by Inma staff).**

### **Development of New Products, Varieties and Value Added Services –**

- 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.**
  
- New vegetable hybrids introduced.
  - **Balad Canary plans to introduce new product lines in Phase II.**
  
- Update grades and standards in cooperation with processors.
  - **Individual processors and processor associations identified for collaboration on grades and standards.**
  
- Packing Sheds at “9” Nissan Market and at the farm gate in Taji Abu Ghraib will add value to vegetables to be sold at the wholesale market. Develop and initiate training programs to ensure understanding of new grades and standards.
  - **Being implemented at farm gate and at retail market.**

#### **Develop Reliable Grower Input Supply Distribution System –**

- 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. Financing identified.
  - **Not started.**

#### **Technical Assistance –**

- 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.**

<b>ANNUAL SECTOR OVERALL</b>	<b>Status for Quarter April – June 2008</b>
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.	Anecdotal data collected from interviews with participants of the Ironhorse Vegetable project indicated a 300% increase in average yield and revenue
Determine baseline and monitor value of fruit and vegetable sales.	Baseline established
Identify implementing partners, including subcontractors, grantees, investors, associations, collaborating farmers, and local experts.	Identified key implementing partners and ongoing activities
Actively seeking partners using intermediaries, PRTs, and other information sources.	Identified partners and actively seeking additional
Evaluate and perform preliminary selection of potential partners.	Evaluation complete and additional partner selection ongoing
Issue subcontract to provide management analysis of potential partners, to meet contract requirements of USAID.	Not completed
<b>MARKETING</b>	
Conduct a value chain analysis of the market sector	Analysis ongoing
Complete description of the annual horticulture value chain.	In process
Monitor project assisted value chain for results of activities	Monitoring in process
Require all partners to monitor and issue quarterly reports on results of activities upon the value chain.	Requirements contractually in place
Implement Market Information System to provide daily pricing to market chain participants	MIS and daily wholesale market prices reported daily to market chain participants
Market information system being developed.	MIS continues to be developed
Undertake a full market assessment to determine quality requirements, prices, marketing channels, buyers, traders, transportation, and jobbers for domestic and export markets- updated yearly.	Full market assessment continues to be conducted
Issue subcontract to undertake market assessment.	Not issued
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.	Evaluation conducted and ongoing for wholesale & retail markets, processing, and storage
Issue subcontract to undertake assessment of the wholesale market infrastructure.	Not issued
Develop and implement a revitalization plan based upon market evaluation.	Revitalization plan developed and implemented
Select markets for revitalization demonstration. Select subcontractor and implement improvements in one market.	Markets selected. NGO formed and improvements being made in one market
Design and implement "Packing Shed" plan to demonstrate efficient methods of sorting, grading, packaging and post harvest care of fresh products.	Design completed and approved by Inma
Select site for first packing shed. Select subcontractor and build packing shed.	Site selected for Al Rabee, Adhamiyah, Baghdad
Management training programs focused on post harvest physiology, quality management, packaging, sales, and marketing.	Developed manual for training on quality, good manufacturing practices and hazard analysis for critical control points (HACCP)

Develop training program plan and materials. Identify training program partner.	Program plan in development and partner identified
Create an inter-province produce transportation system	Potential local partner identified currently operating several refrigerated tractor trailers
Develop plan for the creation of an inter-province produce transportation system.	Plan in development
Secure required capital through grants and leverage funds for enterprise startup	In process
Demonstrate the feasibility of a vertically integrated tomato enterprise in Basra	Feasibility study conducted with potential partner Haj Aboud & Sons.
Develop a business plan and identify sources of capital for a vertically integrated tomato enterprise in Basra.	In development
Assist in the establishment of a tomato paste factory that has been identified as an important intervention by local grower cooperatives and government.	Project implemented with Balad Cannery tomato paste line
Assist in the selection and training of a management team for a tomato paste factory. Procure the necessary equipment and supplies.	Assisted in the selection of management team for training. Procurement in process
Procure the necessary equipment and supplies.	Procurement in process
Demonstrate the feasibility of vertically integrated fruit and vegetable enterprises in selected areas.	Demonstration in Taji area and Al-Rabee in process
Select area for a vertically integrated fruit and vegetable enterprise and conduct feasibility study.	Area selected in western and northern Baghdad province (Golden Crescent)
<b>PRODUCTION AND POST HARVEST</b>	
Improve field cultivation of fruit and vegetables through demonstrations including planting, pollinating, and harvest demonstrated among commercial growers.	Ironhorse/Taji-AbuGraib vegetable improvement project implemented and initial training of participants completed
Establish baseline of existing production based upon GOI reports. Establish demonstration plots and initiate training.	Baseline established using GOI data, demonstration plots planted, and training conducted
Renovate irrigation command areas including the evaluation of alternative irrigation systems which may include drip.	South Rashidiyah irrigation improvement project designed and implemented
Perform evaluation of current irrigation infrastructure, determine needs, and develop plan for alternative irrigation systems.	Evaluation of South Rashidiyah irrigation system in process
Technology transfer of improved post-harvest preparation of product, including packaging, sorting, quality standards, etc.	Cold chain implementation planned and in process of implementation
Develop a training program and issue subcontract to conduct training.	Training program developed
<b>NEW PRODUCT DEVELOPMENT AND VALUE ADDED SERVICES</b>	
Develop product development plans for the introduction of new fresh products and new processed products such as sun dried tomatoes.	Plan in development
Develop plans for the introduction, marketing, and distribution of new products. Introduce one new product.	Plans in development
Update grades and standards and develop training programs to ensure understanding of them.	Grades and standards identified and training programs in development
Update grades and standards in cooperation with processors.	In process
Develop and initiate training programs to ensure understanding of new grades and standards.	Training program in development
<b>INPUT SUPPLY SERVICES</b>	

Identify and partner with established input supply and marketing enterprises.	Partners identified
Undertake input supply chain evaluation and assessment.	Evaluation and assessment in process
Provide financing and technical assistance to a wholesale supplier in a selected irrigation command area.	Not completed
<b>TECHNICAL ASSISTANCE</b>	
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.	Technical assistance team in place and being expanded

**Output Targets and Indicators for Focus 1:** Important outputs in the effort to improve the productivity and value of annual horticulture produce are listed in the table below. However, given the extent and numbers of the results indicators to be reported to USAID, it is not the intent of the *Inma* team to provide USAID periodic reports on the output targets. Outputs will be adequately reflected in the results indicators.

Output	FY 2007 Baseline	FY 2008 Targets	FY 2009 Targets	End of Project Targets (FY 2010)
1.1 Revitalization of markets in two urban areas.	0		1 market	2 markets
1.2 Demonstration packing sheds established. Similar sheds expected to be constructed without project assistance.	0	1 shed	2 sheds	4 sheds
1.3 Transportation system for delivery of fresh fruits and vegetables		Work begun	Work completed	Work completed
1.4 Integrated tomato enterprise established and operating in the Basra area.	0	Feasibility study and business plan complete.	Enterprise established and operating efficiently.	Enterprise sustainable and profitable.
1.4a Jobs directly and indirectly created by 1.4.		0	500 full-time and 1000 part-time jobs created.	1000 full-time and 2000 part-time jobs created.
1.5 Tomato paste processing plant constructed and operating efficiently.	0	Construction begins.	Factory established.	Factory operating efficiently.
1.5a Jobs directly and indirectly created by 1.5		0	200 full-time and 100 part-time jobs created.	480 full-time and 240 part-time jobs created.
1.6 Sustainable and profitable integrated fruit and vegetable industry established and operating.	0	Feasibility study completed.	Packing sheds established and operating efficiently.	Packing sheds established and operating efficiently.
1.6a Jobs directly and indirectly created by 1.6.		0	500 full-time and 1000 part-time jobs created.	2000 full-time and 4000 part-time jobs created.
1.7 Commercial demonstrations established.	0	Demonstrations established on 500 ha.	Demonstrations established on 2000 ha.	Demonstrations established on 5000 ha. Created
1.7a Number of people trained		250 persons trained.	1000 persons trained.	2500 persons trained
1.7b Jobs created		250 seasonal	1500 seasonal	5000 seasonal

		jobs created.	jobs created	jobs
1.8 Reduction of spoilage at market of project assisted produce.	0	10% less spoilage at market.	20% less spoilage at market.	50% less spoilage at market. 5250 persons trained
1.8a Training completed directly and indirectly.		800 persons trained	1800 persons trained	1800 persons trained directly or indirectly
1.9 New products generate additional sales revenue.	0	\$1 million	\$4 million	\$10 million.
1.10 New standards used for products sold in selected markets. Persons trained on new grades and standards.	0	Grades & standards developed.	New standards used in 20% of products in selected markets. 100 persons trained.	New standards used in 50% of products in selected markets. 250 persons trained.
1.11 Enhanced direct-to-grower distribution system established in key irrigation command areas.	0	Completion of input supply chain assessment. Implementation of distribution system. 2 associations facilitate supply distribution & marketing	10 associations facilitate supply distribution & marketing.	20 associations facilitate supply distribution & marketing.
1.11a Jobs created.		. 25 full-time jobs; 50 seasonal jobs	100 full-time jobs; 200 seasonal jobs	200 full-time; 500 seasonal jobs

## LIVESTOCK AND FEED

The livestock and feed sector is comprised of several important agribusiness sectors which, due to the demand for livestock products such as high-value meat cuts and halal processed products, have the potential to thrive and be quite profitable. Promising areas include production and marketing of feeds, forages, and development of feed mills; lamb fattening; cattle production (beef and dairy); fish farming; and poultry production. Secondary products such as wool and hides, and dairy products such as yogurt and cheese also may be included.

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. Public reliable electricity is not available now in most of the country, but is expected to be more reliably available in the third year of the program.

**Feed Lots** - The process of reaching the goals of increasing meat consumption by 100% will necessitate Inma to move on many fronts at the same time. It is only in this way that the 10 commercial feed lots will be operational in the three years time span of this project. In addition, the project will enhance the quality and availability of veterinarian services available to feed lots, as well as improved sourcing of animals. Inma will address fish marketing in a similar manner..

**Feed Mills** – the Inma project will have helped establish feedlots that are producing finished cattle and sheep. Linked to these feedlots Inma will bolster feed mills to supply a wide range of feed products for the feedlots as well as for fish poultry and dairy farms and other sub-sectors of the national livestock industry. After our first year, we will have pinpointed at least one of the target of two feed mill enterprises to work with in different regions of Iraq. They will also be close to the areas selected to establish sources of new raw materials needed for formulated balanced feed rations. These raw materials include oilseed corps for protein, maize, and sorghum for energy, plus fodder crops such as alfalfa.

**Commercial Size Operation** – Inma will help develop the feed industry by first working with larger operators that will quickly benefit from investments in animal feed and fodder production. These farmers will have significant land holdings that provide opportunity for feed-fodder production on a scale that justifies mechanized production. Inma will train these farmers to produce feed grains and fodder at lower costs to allow them to compete with imports and recapture the domestic market.

Inma will determine the size of farming enterprises that can make the transition to commercial feed and livestock production through the use of value-chain analysis and business plan development in selected provinces. Along with this value chain analysis, large scale field crop demonstrations for soybeans, maize, sorghum, sugar beet, hay, and alfalfa will be conducted with at least 300 farmers who can offer at least ten

donums each of land to participate in the demonstrations. This will constitute the critical mass necessary for demonstrating production year-round – not just in one season – in order for other farmers to see that the technologies and cultural practices recommended are doable and that farmers can make money cultivating these new crops.

We also need to show that there is strong market demand for such crops. In addition, Inma needs to demonstrate that both feed production and feedlot operations can be done profitably year around in rural areas with good connection to the major urban markets.

## 4<sup>th</sup> Quarter (April-June 2008) Developments

**Fish Production** – Duane Stone is rewriting this section – In Babil, *Inma* is increasing the ability of Fish Farmers to produce for a competitive market by assisting with strengthening of the fish value chain links beginning with the market. A fully functioning, efficient production and marketing chain will increase availability of superior quality fish in the market and also provide increased employment opportunities for the Fish production Industry and industries associated with Fish production (producers of feed, transporters, processors, marketers). The expected result will be an increased Fish supply and expanding markets reaching well beyond the 2008 season.

In Babil, *Inma* is implementing a plan to work with 50-100 from June to September selected Fish Farmers to transfer technical knowledge on fish feeding, pond management, harvesting techniques, transport methods, and marketing. *Inma* has initiated a plan to provide training to selected Demonstration Fish Farms, using an intensive outreach model of assistance. 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.

Feed Grain: In this quarter *Inma*, in coordination with PRT in Al-Anbar province has completed a feed grain (maize) establishment promotional activity with successful results. Through the *Al-Anbar Feed Grains Promotion Project* seasonal employment was generated, yields increased, and selling prices increased. Final harvest yield from 46 farmers totaling 295.5 donums (approximately 74 hectares) was 30% more than the previous crop yield when farmers used traditional cultivation techniques.

**Wheat and Barley Planting** --The Anbar/Diyala Wheat and Barley Fall Planting Project is ongoing. The project introduced modern high yielding varieties of wheat and barley. Harvest will be completed in July, and Inma will receive seeds from this harvest to be distributed to other farmers by PRTs and ePRTs.

**Feed Lots** – Projects are under analysis and development with PRTs, ePRTs, and other partners to demonstrate the value of utilizing higher protein rations in general and of alfalfa in particular. The project will establish alfalfa hay as a high value crop stimulating local alfalfa production and markets. The effectiveness of good nutrition along with fundamentals of proper management in meat production will be demonstrated. A letter was sent to PRTs, and ePRTs requesting nominations for feedlot locations. These nominations will be considered by the subcontractor with Inma

making the final decisions on each location.

Inma proceeded with actions required for selection of one or more contractors for supervising the project and the construction of the *Feedlots for Sheep and Beef Fattening*. A bidder's meeting was conducted with all potential contractors at the Inma office, proposals were submitted, and a subcontractor was selected. A contract and SOW for the subcontractor was written and is now in the process of being signed. The selection process will begin in August, with construction of the first feedlot beginning in September.

**Dairy** - Two large dairy production centers has expressed interest in reestablishing their dairies to their former production and employment levels. Inma is waiting for them to submit a work plan for consideration.

**Meat Processing** -- A survey and report were completed on the practices of butchers in the Diyala Province. The *Diyala Butcher's Focus Group* presented several significant findings, and serve as an invaluable point of reference in the development of the beef and sheep value chain, and the development of the feedlot project.

**Value Chain Analysis** - Value Chain Assessments (VCA's) for fish, red meat, dairy and animal feeds have been completed.

**Feed Mills or Feed Deposits** – Large and small feed mills or feed deposes are an intricate part of the feed grains, forage, fish, feedlot, dairy, and poultry programs. 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, and bale it to 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.

Feed mills business will grow during the next two quarters as feedlots will require feed grains to balance the rations and compliment the alfalfa hay. The feedlot project will demonstrate the importance of high quality forages and grains in producing quality meats at less cost per kg of body weight gain increasing the demand for feed grains such as barley, corn, wheat, oil meals, etc.

## Annual Work Plan Activities Status

In addition to the above highlights, please find below a summary of Inma 4<sup>th</sup> Quarter program progress in achieving planned Livestock and Feed activities set forth in the Annual Work Plan matrix.

### Major Activity –

- Implementing Partners evaluated, selected, and assisted.
  - **Groups identified.**
  
- Sub contractor for the feedlots has selected, and contract in the process of being signed.
  - **Because of all the projects in planning and underway, the process is ongoing.**

### Marketing and Related Development –

- Complete description of the commercial livestock/feed markets in the 5 targeted areas.
  - **Description of livestock/feed market complete.**
  
- Survey planning and testing initiated. Identify existing standards for meat value chain.
  - **Not yet initiated.**
  
- Market information system being developed.
  - **Work underway.**
  
- Training program designed and testing program implemented.
  - **Work initiated.**
  
- Modernize meat marketing based upon prior analysis.
  - **Data and information gathering underway.**

### Feedlot Operators –

- Conduct an inventory of feedlot enterprises supplying the 5 selected urban areas. Report of current feedlot operations completed.
  - **5 enterprises selected for assistance.**

- PRTs and ePRTs have submitted possible locations for feedlots in each of the 5 selected urban areas.
  - **They have taken into consideration labor feed supplies including alfalfa hay, grains and feed mills; urban marketing centers; environmental impact; water availability; roads; etc.**
  - **The first feedlot location will be selected in the Kirkuk – Erbil area in August followed shortly there after by one a month selected from the 5 selected areas.**
  - **The subcontractor consider all suggested locations and will distribute RFPs to qualified owners. Inma will make the final selection.**
  
- Support and assist the selected feedlots with the best infrastructure, equipment, materials, and training.
  - **The subcontractor in cooperation with Inma will provide technical assistance in feedlot construction, finding the best contractors for all feed and supplies, all aspects of management, and in training. It is part of the SOW for the subcontractor.**
  
- Provide training to feedlot managers in feedlot operation and business management.
  - **Training courses designed.**
  - **Trainers and candidates selected.**
  - **Training plan under development - a feedlot management guide has been developed as a training guide by Inma. Beside group training for managers, accounts, and veterinarians, one on one training will be provided by the subcontractor on the weekly visits to the feedlot for the first cycle of animals.**

#### **Feed Mill Operators –**

- Implement a contract to do an inventory of existing commercial feed mills operators in selected regions.
  - **Contractor identified and begins the inventory of existing commercial feed mills in selected regions.**
  - **Completed directly by Inma in the North Erbil region. As part of the subcontractors SOW, a feasibility study will be done for each feedlot and that included availability of feed mills in the area.**
  
- Identify and assist six feed mills in key regions to increase their levels of operation and quality of feed.
  - **Not done yet. This however will be part of the feedlot project to assure quality grains and mixes for the feedlots.**
  
- Marketing oil seed meal for livestock.
  - **Not this year. Oil seed meals will have a role in supplying protein for the feedlot feed rations.**

- In-country training of key technical and management personnel of selected feed mills.
  - **Not done. To assure balanced grain rations for the feedlots, training will be provided in feed batch preparation.**
  
- Arrange for in-country feed analysis service from an established facility and capability to formulate livestock feed rations.
  - **Contractor selected to set up feed analysis system.**
  - **3rd Quarter, Year Two. However in the mean time, forage and grain analysis are being done on a weekly basis by Dairy One forage and grain analysis in Ithica NY. While assisting the feed mills supplying the fish farms, weekly grain mix samples have been sent to the New York forage and grain testing lab.**

#### Fodder and Feed Grains Production –

- Implement systematic procedure for selecting six priority regions with high potential for livestock and feed production near the major urban areas.
  - **Survey data collection activity designed and testing initiated.**
  
- Hybrid corn – summer planting – Anbar. Evaluate the performance of the maize planted in Anbar.
  - **Done.**
  
- Fall planting – wheat and barley – Anbar and Dyala governorates.
  - **Planting completed. Harvest began in June and will be completed in July. The project introduced modern high yielding varieties of wheat and barley seed. Inma will receive seed barley and wheat from the project to be distributed by PRTs to many other farmers thus improving the genetic of the seed over a large area.**
  
- Oilseed Crops – Spring planting.
  - **Underway 2009.**
  
- Alfalfa, bersim, and hay planting, production, and harvesting.
  - **This project will be part of the feedlot project to assure a quality supply of hay. Sept. Oct. Nov. 2008**
  
- Provide training in the field level on time of cutting and post harvesting management.

- **This will be part of the feedlot project and the management guide, and part of the planned training programs with the subcontractor in cooperation with Inma.**
- Issue sub-contract and conduct field demonstrations and workshops to disseminate knowledge about improved cultural practices and better varieties of feed grains and forage crops.
  - **Partner identified for the sub-contract.**
  - **Underway for wheat and barley project. Part of the SOW for the feedlot subcontractor in cooperation with Inma.**

#### **Livestock Production –**

- Set up Veterinary Service Providers (VSP) in select districts.
  - **Work will proceed with Feed Lots. First VSP will be setup with the first feedlot and each succeeding lot. First one will be in September.**
- Train VSP's in artificial insemination and procure and distribute equipment and materials through them.
  - **Third Year.**
- Distribute basic animal health and nutrition supplies through VSP's.
  - **Starting with the first feedlot in October and all succeeding lots. A VSP will be associated with each feedlot either on the feedlot premises or in the vicinity.**
- Assist Fish Farm owners with improved marketing.
  - **Will be done when grow-out is complete.**

#### **Technical Assistance –**

- 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.
  - **Report on the baseline of the slaughter houses completed by experts.**
  - **Initial work underway for feed grain production.**
- Hire Feedlot management and operations expert.
  - **In progress with subcontractor.**
- Hire Feedmill management and operations expert.
  - **Not done.**

- Hire Animal Nutritionist.
  - **In process with subcontractor.**
  
- Hire Animal breeder.
  - **No.**
  
- Hire Fish Production Expert.
  - **Hired.**
  
- Hire Animal Health Expert.
  - **Not required.**
  
- Hire Meat processing and marketing expert.
  - **No.**
  
- Hire Poultry scientist.
  - **In process.**
  
- Hire Agricultural economist.
  - **Yes.**
  
- Hire Forage production.
  - **In progress**
  
- Hire Agricultural Extension for TOT.
  - **Not required.**
  
- Hire Agribusiness/Finance Expert.
  - **In progress**
  
- Hire Feed Grain/Oilseeds Expert.
  - **No.**

<b>LIVESTOCK SECTOR OVERALL RESULTS</b>	<b>Status Quarter April – June 2008</b>
Strengthen Iraqi livestock and feed industries through improved production, value-added, and marketing.	The improved quality barley wheat and oil seed projects improved production yields and grain quality. The quality beef and lamb meats from the feedlot lots will add further value to the grains in the next quarter. Plans are being developed to market these quality meats at the market place during the second quarter of year 2.
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.	The five key urban marketing centers have been identified. During the next quarter an analysis of each urban center will be concluded as part of the feedlot subcontractor's responsibility. Fish farm locations have been determined.
Identify implementing partners, including subcontractors, grantees, investors, associations, collaborating farmers, and local experts.	The subcontractor has been identified and beneficiaries, investors, and local experts are in the process of being identified for the feedlots. The grain projects have already been concluded or near conclusion.
Implementing partners evaluated, selected, and assisted.	The process has begun.
<b>MARKETING</b>	
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.	
Complete description of the commercial livestock/feed markets, in the 5 targeted areas.	The description of the local livestock marketed, feeds grown, and harvest methods has been determined.
Identify existing standards for meat value chain.	
Establish and maintain a Market Information System that monitors wholesale prices and quantities sold of those factors that affect the livestock market.	Being developed
Market information system being developed.	Being developed
Provide training in quality standards, hygiene, marketing and packaging, and business management for meat processing.	

Training program designed and testing program implemented.	
Modernize meat marketing based upon prior analysis.	
<b>FEEDLOT OPERATIONS</b>	
Support the establishment and operation of new feedlots and/or rehabilitate selected feedlots.	The subcontractor to manage the feedlot project has been selected, and the contract is in the process of being signed. The SOW in the contract supports the establishment and operation of up to 10 feedlots the first year.
Conduct an inventory of feedlot enterprises supplying the 5 selected urban areas.	In progress and part of the subcontractors contract.
Support and assist the 5 selected feedlots with the best infrastructure, equipment, materials, and training.	In progress with the first feedlot to be build during the next quarter. Starting in November, one feedlot will be started per month. Training is part of the SOW for subcontractor
Provide training to feedlot managers in feedlot operation and business management.	During this quarter, beef and lamb feedlot management guides have been developed. These management guides will provide the foundation of the group and individual training.
<b>FEEDMILL OPERATIONS</b>	
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.	The subcontractor for the feedlot project will assess the ability of feed mills supplying the feedlots. The feed grain mixes supplying the fish projects is being monitored by analysis testing and the feed mills are receiving guidance to improve the feeds.
Implement a contract to do an inventory of existing commercial feed mills operators in selected regions	The contract on the feedlots requests a study of the feed mills in each of the 5 regions where feed mills will be located. A clear inventory of the existing feed mills will be available during the next 2 quarters.
Support the establishment and rehabilitation of 12-14 feed mills.	
Identify and assist six feed mills in key regions to increase their levels of operation and quality of feed.	
Marketing oil seed meal for livestock.	The fish farms are providing a market for oil seed meal this quarter, and the feed lots will be an additional market starting the next 2

	quarters.
<b>Set up oilseed extraction processing facility. Make plans for oilseed extraction and meal processing for livestock feed.</b>	
<b>Train personnel in feed mill production, management, and technical skills.</b>	<b>This will be part of the feedlot projects with feed mills supplying the lots. Feed mills supplying the fish farms are receiving guidance this quarter.</b>
<b>In-country training of key technical and management personnel of selected feed mills.</b>	
<b>Establish a system for feed analysis and the provision of standardized ration formulations designed to meet feeder demands.</b>	<b>The system of feed analysis has begun with the fish feeds this quarter, and the feedlot project will start the next two quarters. The grain and forage samples are being sent via FedEx to the Dairy One forage lab in Ithaca, NY with an average turn-around time of 1 week from shipment to results via e-mail.</b>
<b>Arrange for in-country feed analysis service from an established facility and capability to formulate livestock feed rations.</b>	<b>No in-country feed analysis has been developed. Research is underway looking for low cost infra red testing analysis. Until volume justifies the expense, shipping samples to NY for chemical analysis is the most cost effective and most accurate system</b>
<b>FEED PRODUCTION</b>	
<b>Identify potential feed production areas, focusing on irrigation command areas.</b>	<b>The feed production areas have been identifies, and are playing a role in the location of feedlots.</b>
<b>Implement systematic procedure for selecting six priority regions with high potential for livestock and feed production near the major urban centers</b>	<b>Work has already been completed for feedlot locations; however a more intense analysis will be provided by the subcontractor of the feedlot project and will be used in making the final decisions on lot locations.</b>
<b>Proceed with the rehabilitation of irrigation systems according to the irrigation work plan.</b>	
<b>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.</b>	<b>Projects completed or near completion are in corn, barley, wheat, and oil seeds. Alfalfa and mixed grass alfalfa projects will be developed with the feedlot project.</b>
<b>Hybrid corn - summer planting - Anbar</b>	

Hybrid corn and sorghum - spring planting	
Fall planting - wheat and barley - Anbar and Dyala governorates	Near completion with harvest under way. Seed distribution will begin the end of July.
Oilseed crops - spring planting	
Alfalfa and hay planting, production and harvesting.	Two alfalfa hay dealers have been located who are producing high quality alfalfa hay. They are buying green alfalfa from 100's of small farmers, drying it, and baling it for livestock farmers and will be selling to the feedlots. The feedlot project will be training these dealers on planting, production, and harvesting methods so they can teach their clients.
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.	Part of the feedlot project subcontractor SOW. The wheat, barley, corn, and oil seed projects has provided this training.
Provide training in the field level on time of cutting and post harvesting management.	Part of the feedlot project subcontractor SOW
Issue subcontract and conduct field demonstrations and workshops to disseminate knowledge about improved cultural practices and better varieties of feed grains and forage crops.	Conducted in the feed grain projects, and planned for the forage crops in the feedlot project.
<b>LIVESTOCK PRODUCTION</b>	
Provide a minimum of 10 grants \$25,000 to \$50,000 to Veterinary Service Providers (VSPs) based upon requests for proposals.	None provided in this quarter. However this cost is part of the feedlot budget. It will be part of the RFPs in each feedlot, and 10 feedlots are planned over the next year.
Set up Veterinary Service Providers (VSP) in select districts	Districts will be selected in the feedlot selection process

<p><b>Train VSP's in artificial insemination and procure and distribute equipment and materials through them.</b></p>	<p><b>Artificial insemination is not planned for the next year. Animal nutrition is the first step to increasing animal production, and improving conception rates. We must first give better fed animals to be able to utilize genetic gains.</b></p>
<p><b>Distribute basic animal health and nutrition supplies through VSP's</b></p>	<p><b>Basic part of each feedlot, and will begin with the first feedlot the next quarter.</b></p>
<p><b>Establish and rehabilitate 10 fish farms with commercial potential.</b></p>	<p><b>One fish farm has been rehabilitated, and several hundred have received fingerlings. Better quality feed is being fed on demonstration farms.</b></p>
<p><b>Assist fish farm owners with improved marketing.</b></p>	
<p><b>TECHNICAL ASSISTANCE</b></p>	
<p><b>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.</b></p>	<p><b>Technical assistance was provided in fish breeding, fingerling development (aquaculture); feed crops planting, growth, and harvest; animal nutrition; dairy feasibility study; and fish farmer associations.</b></p>
<p><b>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</b></p>	

**Output Targets and Indicators for Focus 3.** Important outputs in the effort to improve the productivity and value of products in the livestock and fish farming industries are listed in the table below. However, given the extent and numbers of the results indicators to be reported to USAID, it is not the intent of the *Inma* team to provide USAID periodic reports on the output targets. Outputs will be adequately reflected in the results indicators.

Output	FY 2007 Baseline	FY 2008 Targets	FY 2009 Targets	End of Project Targets (FY 2010)
3.1 Number of jobs created from modernized meat marketing	0	20 full-time jobs created.	100 full-time jobs created.	200 full-time jobs created.
3.2 Commercial feedlots operating.	0	5 feedlots established.	10 feedlots established.	10 feedlots established and operating at commercial levels.
3.2a Jobs created.	0	50 full-time jobs; 100 part-time jobs	150 full-time jobs; 300 part-time jobs	150 full-time jobs; 300 part-time jobs
3.3 Feed mills rehabilitated and new ones established.	0	5 feed mills are operational at 60% capacity.	8 feed mills are operational at 75% capacity.	10 feed mills are operational.
3.3a Jobs created	0	50 full-time; 100 part-time jobs	100 full-time; 200 part-time jobs	150 full-time; 300 part-time jobs
3.4 Feed rations formulated. Feed analysis lab operating sustainably.	0	Feed rations have been formulated.	Feed analysis facility established.	Feed analysis facility operating sustainably.
3.5 New varieties of feed and forage produced through contract farming. We expect additional farmers who do not receive project assistance to adopt the same varieties and methods.	0	1000 farmers in production.	5000 farmers in production.	10,000 farmers in production.
3.6 Veterinary Service Providers operating.	0	Grants awarded.	6 VSPs operating	6 VSPs operating with positive cash flow.
3.7 Fish farms established and/or rehabilitated.	0	Identify farms, establish needs, begin upgrade or establish	Infrastructure on 5 fish farms has been upgraded to required levels.	10 selected fish farms have had infrastructure repaired and 5 of them have had their production systems upgraded production.
3.8 Project assisted fish farm owners use improved marketing to increase unit value (price per kilo) of product.	0	Situation improved to allow for increase in value	Unit value of increased 10% on project-assisted farms.	Unit value of production increased 20% on project-assisted farms.

# CROSS CUTTING ACTIVITIES

## JOB ORDER SYSTEM

In order to process project support requests from ePRTs/PRTs operating in Iraq's provinces, Inma has devised a "Job Order System" (JOS) that is posted on the Inma website portal and is easily accessible to participating groups. The Job Order System is a tool to help sponsors organize proposal ideas at an early stage for rapid consideration by the Inma Team. The Inma Team devised the Job Order System as a tool to track larger numbers of project proposals and applications for Inma support.

### 4<sup>th</sup> Quarter (April-June 2008) Developments

During the quarter, *Inma* began refining its operational approach. Experience with several key "anchor" agribusiness enterprises (described in section) 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* has begun 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.

## GRANT TO LOAN ACTIVITY

At the end of the previous quarterly reporting period the Grant To Loan program was approved by the USAID Director. Amendment of Inma Implementation Plan to Broaden Grant Program to Private Financial Institutions permits Inma to provide grants directly to private commercial banks prepared to extend loans to Inma approved ag business enterprises. During this quarterly work plan period the Inma has directed its efforts to refine the G2L program strategy, identify and hire key staff and implement the first phase activity of selecting the first year bank participants.

During the months for April and May, Inma followed an aggressive program of contacting each of the 29 private commercial banks to group and individual meetings to discuss the G2L program. The graph below outlines the highlights of these activities:

Dates	Description of Activity	Participants/Contacts	Comments
April 13	Initial Contact letters Sent to 29 Banks Regarding G2L Program and Invitation to Introductory Meeting ( Expression on Interest (EOI) sent to each Bank)	29 Bank confirm receipt of introductory material	
April 19	Introductory G2L Meeting Presentation and Q&A	Attendance 16 Banks	Presentation focus on general concept of

			Inma's Ag Business mandate & G2L Role
April 20- May 12	Individually Scheduled Meeting with senior staff of Interested Banks. 2-4 hour meetings with business development and credit staff	Met with 10 interested Private Commercial Banks and CB Bank Association and ICBG Management	Discussion of G2L Program design and Banks impression and suggestions
May 18	Inma Due Diligence Package sent to each bank	29 Commercial Banks receive Packages by email and by hand	Required for all Inma's participating partners
May 26 –June 3	Weeks and Henry Meetings in Amman with Iraqi Commercial Bank Chairmen and Senior management Staff	Met one-on-one with Senior Representatives of 5 Iraqi Commercial Bank	For security reasons most senior bank officers live outside of Iraq.
May 26 -June 3	Meeting with Bank Training Organizations to discuss potential collaboration with the Inma Program	Bank Solutions is the only group that showed interest in Iraq bank training	Contractors are reluctant to work in Iraq and most will not work in Baghdad
May 26- June 3	Meeting with Micro Finance Organization. Finalized an agriculture loan product for the 100 Inma Demonstration fish farmers in Babel Governorate	CHF Iraq is located in Amman Jordan, meet with technical and program staff to discuss service grant and loan grant.	CHF is the only certified microfinance institution working in the Babil region prepared to service Agriculture clients
June 5- June 30	Completion of the G2L program documentation and presenting the design to Inma management and USAID for comment and approvals. Refined design includes 2 new types of G2L Solicitations and a Phase 1 Selection process modification	Inma Management and Program Staff USAID CTO	Timeline for the RFA release is Mid July

Over this period recruitment and hiring of an *Inma* team to manage the GTL program has occurred.. On May 1 the Inma DCOP of Operations was tasked to head up the G2L program. A Senior Expatriate Commercial Banker was recruited in late May and mobilized in June to Iraq. The Grants team, M&E teams have played key role in reviewing procedures and compliance issues for the operation of the new program unit. The new G2L team includes the professional experience in bank operations, loan management, microfinance and grants. The team members have extensive agriculture financing and credit systems experience. The first RFA's should be presented to banks in late August and first grant increment for loans given and the first loans completed and applicant receiving loan funds in early October of 2008.

# **AGRICULTURE INFORMATION TO FARMERS AND FOOD PROCESSORS**

In the transition from planning and administrative controls on the economy towards greater reliance on the market, accurate information on agricultural prices, quantity of products, and the quality of products in the wholesale markets will play a fundamental role in determining the structure and performance of agricultural production and marketing. Wholesale prices are of greatest interest for trading and marketing purposes.

## **4<sup>th</sup> Quarter (April-June 2008) Developments**

Agricultural Market Information System (AMIS) - Inma has succeeded in reestablishing and maintaining continuity through the support of ANKA in the collection of data for the Agriculture Market Information System. During the quarter, Inma contracted a Marketing Specialist to develop and set up an Agricultural Market Information System (AMIS) to collect and disseminate marketing information to provide farmers, private sector entrepreneurs, and public sector policy makers with timely and reliable data on wholesale prices, quality, and quantity of products in the wholesale markets for the main agricultural products and inputs, as well as constraints that may impact on decisions.

# **TRAINING**

## **4<sup>th</sup> Quarter (April-June 2008) Developments**

Master's Degree Program - The Master's Degree Program has been forced to alter stipulations in order to help students prepare and take required tests (TOEFEL and GRE). Of the students who submitted applications few, if any, met the rigorous requirements for graduate work in the U.S. Among other solutions under consideration, one option would allow students to learn English for 6 months prior to program entry.

Training of Counterpart Organizations - Coupled with the Iron Horse –Vegetable Crop Improvement Project Inma provided technical training programs, aimed to exponentially increase the farmer's productivity and provide a substantial increase in the project-selected farmers' income. A Small-Agribusiness Management Training Course in Erbil provided for 49 carefully selected Trainers of Trainers (TOT) who disseminated their acquired information to over 1,000 farm units.

The training programs included commercial demonstrations utilizing new varieties of seed, information on improved planting systems, and 'best practices' techniques in harvesting, grading, sorting, and packing. This project targeted over 1,000 farms, where each farm unit contained more than 10 members and employed over 10,000 people throughout the value chain, including; owners, operators and farm laborers.

# IRRIGATION, WATER MANAGEMENT, & SOIL RECLAMATION

With the exception of the Kurdish North that can produce rain fed winter grains such as wheat and barley, virtually all of Iraq agriculture requires irrigation. Thus in Inma most of the irrigation, water management, and soil reclamation effort will be a cross commodity group support activity that will depend on the needs of the specific irrigation command areas identified for the value chain interventions. The irrigation support effort will involve all three commodity groups and the various types of irrigation systems found in their areas. Within these areas, Inma will undertake rehabilitation of the irrigation and drainage canal network and work with the farmers on the maintenance and operations of the individual field canals. Where necessary and within these irrigation command areas, Inma will undertake salinity reclamation work for project-assisted farmers. In addition, Inma will provide consulting services to the PRT on different irrigation and water management issues

Since Inma's objective is to foster the private agribusiness 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 will be 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.

## 4<sup>th</sup> Quarter (April-June 2008) Developments

Lower Rashidiya Irrigation - Inma, ePRT Baghdad 3, Army, Tattweer, 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.

**Output Targets and Indicators for Focus 4.** Important outputs in the cross-cutting effort to improve the productivity and value of the Iraqi agri-business sector are listed in the table below. However, given the extent and numbers of the results indicators to be reported to USAID, it is not the intent of the *Inma* team to provide USAID periodic reports on the output targets. Outputs will be adequately reflected in the results indicators.

Output	FY 2007 Baseline	FY 2008 Targets	FY 2009 Targets	End of Project Targets (FY 2010)
4.1 Persons trained in annual horticulture operations management, sales and marketing, trainers of operational functions. These will train additional people..	0	300 persons	800 persons	1500 persons
4.2 (a) Jobs created and (b) training completed in regard to the renovation of irrigation command areas in annual	0	(a)100 jobs created;	(a) 400 jobs created. (b) 400 persons	Refer to irrigation narrative in Work Plan for information on

horticulture areas. .		(b) 100 persons trained.	trained.	renovation. (a) 1000 jobs created. (b) 1000 persons trained.
4.3 Training completed in improved field cultivation methods in perennial horticultural areas. Extension personnel and farm operators trained in soil testing and analysis.	0	Training needs assessment completed	1200 persons trained.	3000 persons trained.
4.4 Persons in the livestock industry trained in quality standards, hygiene, marketing and packaging, and business management for meat processing.	0	250 persons trained	1000 persons trained	2500 persons trained
4.5 Feedlot managers trained in operation and management.	0	100 trained.	250 trained.	300 trained.
4.6 Personnel trained in feed mill management and production, and technical formulation of feed.	0	200 persons trained.	600 persons trained.	800 persons trained.
4.7 Irrigation command areas rehabilitated in livestock and fish farm areas.	0	Studies begun and finished	3 systems optimized.	6 irrigation command areas irrigating an average of 5000 ha optimized operational.
4.8 Persons trained in post-harvest handling of animal feed, operations management, production technology, input providers, markets, and farm profitability.	0	2055 persons trained.	11,000 persons trained.	20,550 persons trained.

## COMMUNICATIONS

### 4<sup>th</sup> Quarter (April-June) Developments

Program Identity Materials – Inma’s 4-page PR folders, in both English and Arabic, have gone into their second printing. Banners were created for the upcoming Date Conference and for the Euphrates Fish Farm. A grand opening plaque was created for the New Baghdad Market. The PR team also produced baseball caps (appropriately sandy beige) embroidered with the Inma logo, which are proving to be very popular as the summer unfolds.

A major media event took place at Euphrates Fish Farm with television and press attending. Guests of honor were Brigadier General Edward Cardon, U.S. Army and Denise Herbol, USAID Acting Mission Director. A commemorative signing document and several informational posters were created in addition to the large color banner. NBC also toured Inma work in Taji, focusing on “a day in the life of...” our USAID counterpart Brian Conklin.

*Inma’s* Arabic language calendars were so popular that an 18-month calendar is in production to cover January 2009 – June 2010 (when the Inma Program will have completed its 3 year contract). The second edition will feature Iraqi children’s drawings for artwork. Monthly pages have been edited for agricultural content and PO for design will be issued shortly.

Communications contributed editing and photographs as needed to reports, PowerPoint, papers, and other deliverables. Created Briefing Book for new personnel and Working Papers on various Inma efforts. Press kits were assembled for several events, including the Date Conference and both press gatherings. Fingerling distribution vouchers were created and printed but were never used by North Babil fingerlings distributors.

Continuous Update of Inma Web site ( [www.inma-iraq.com](http://www.inma-iraq.com) ) - The *Inma* website is continuously updated with press releases, feature articles, new links and photographs.

Presentations and Publishable Material -

- Maize story published in USAID's Frontlines
- Worked with USAID Baghdad on press releases for EFF and BCF
- US Embassy website carried our story about NBC visiting Taji
- A number of "success stories" were drafted and placed on the website

**Inma in the News: Economic Opportunity Replaces Conflict in Iraq**

2008-05-28 Published online at *PR Newswire* (<http://sev.prnewswire.com>)

The U.S. Agency for International Development: Economic Opportunity Replaces Conflict in Iraq

**Economic Opportunity Replaces Conflict in Iraq**

BALAD, Iraq, May 9 /PRNewswire-US Newswire/ -- The U.S. Agency for International Development's (USAID) Agribusiness Program, 'Inma,' is leading the way to economic recovery in the city of Balad, 50 miles north of Baghdad.

**Swimming Home from Hillah**

2008-05-29

*Hillah, 26 May 2008* – With press parade and ceremonial fanfare millions of fingerlings at the Euphrates Fish Farm (EFF) began swimming home toward their new grow-out ponds...

**Investing in Babil Aquaculture: How Small Fry Become Big Fish**

2008-05-21

*Hillah, 21 May 2008* - USAID's *Inma* Agribusiness Program will soon have millions of carp fingerlings ready for delivery to hundreds of fish farms across Central and Southern Iraq...

**USAID Farm Program Puts Money in Iraqi Pockets** (May 16, 2008) - U.S. Embassy Baghdad.

USAID Farm Program Puts Money in Iraqi Pockets - (Hybrid seed doubles, triples yields for Taji producers) May 16, 2008

**USAID Invests \$3 Million in Iraq's Aquaculture**

HILLAH, Iraq, May 23 /PRNewswire-US Newswire/ -- The United States Agency for International Development's (USAID) *Inma* agribusiness program in Iraq will soon have millions of carp fingerlings ready for delivery to hundreds of fish farms across central and southern portions of the country...

# PERFORMANCE MONITORING

The Inma Program received word on April 18, 2008 from the Director, Economic Growth and Agriculture Office, USAID/Iraq that Data Quality Self-Assessments (DQAs) were required on all of Inma's Performance Monitoring Plan (PMP) indicators. A template for the DQA was provided. Subsequently, completion date for this task was set as of June 30, 2008. A summary of the findings of that self-assessment follows.

In general, it is premature to provide meaningful self-assessments as the program has been field active for less than a year. As Inma is an agriculturally based program, it must necessarily follow agricultural cycles. For instance, the date season in Iraq peaks in August and September. Inma was at start up in August 2007 and missed the season. There was little to be done in the date sector until this upcoming season. Thus there is too little in the date sector to date to provide the basis for a meaningful self-assessment. To a lesser but still important degree, this situation is applicable across the board for nearly all of Inma's ongoing and planned activities.

The DQA exercise did provide valuable insight into the indicators themselves leading Inma to conclude that a number of indicators no longer apply to the program as it has gained shape and momentum. Furthermore, targets for even a greater number of indicators require reconsideration and perhaps revision. Inma intends to seek formal concurrence on changes to the PMP from USAID/Iraq with the submission of a revised PMP to that Mission by August 7, 2008.

It is also premature to provide definitive comments on the burden borne by the Inma Program in monitoring and reporting program results. Inma provides an overall program estimate of the burden but cannot break it down to an indicator by indicator level at this time as many costs have yet to be incurred and a number of Inma projects have yet to commence. In addition, there are likely to be opportunities for Inma intervention which have yet to be identified.

The Inma Agribusiness Program focuses on long term and sustainable results critical to building and maintaining stability, security, and prosperity in Iraq. Through capital and infrastructure investment, training, market systems, and introduction of varieties and technologies, the results of Inma include creation of thousands of jobs within the target Commodity Group complexes, and millions of dollars in additional sales revenue, including a doubling of gross sales revenue for many crops. The vision for the Inma Agribusiness Program is to establish the foundation for a viable and profitable commercial agribusiness sector that provides food security for the people of Iraq with opportunities for significant job creation and new business opportunities.

The following Mission Level and Performance Indicators provide a high level analysis of the Inma Program. Inma, to date, has completed one post-winter crop project. Projects begun or soon to begin include winter wheat and barley, seasonal vegetables, the rehabilitation of two factories, the re-establishment of viable fish-farming in the Hillah-Babel area, the rehabilitation of a major wholesale/retail market in Baghdad, the establishment of a viable market information system, the establishment of commercial feed mills and feed lots, and the introduction of commercial greenhouses and area-wide grading and packing sheds. The fruit and date season begins in the next quarter.

Without the completion of the activities, including training, within these projects, it is too early to measure the results associated with them. Many of the numbers for these Indicators will not be available until next quarter when some of these activities come to completion.

## **MISSION LEVEL INDICATORS**

### **4<sup>th</sup> Quarter (April-June 2008) Developments**

*Inma's* program objectives address the following intermediate results (IRs) designated by USAID:

**IR8 : Private Sector Opportunities Expanded**

**IR8.2a: Increase Crop Diversity and Livestock Production;**

**IR8.2b: Deliver Agricultural Information Systems;**

**IR8.2c: Sustainable Programs for Soil Reclamation and Water Resources;**

**IR8.2d: Increase Competitiveness of Agribusiness Enterprises; and**

**IR8.2e: Increase Domestic and Foreign Partnerships**

## **PERFORMANCE INDICATORS**

### **4<sup>th</sup> Quarter (April-June 2008) Developments**

- SO 8—Private Sector Opportunities Expanded
  - Indicator 1—Increase of total sales of program assisted enterprises (given in US\$ millions)
  - Early measurements include the Anbar Maize Project (second crop on land growing winter wheat) and the production and sale of fingerlings at the Euphrates Fish Farm. Final results for the Anbar-Diyala wheat and barley contract farming project will be received in the coming quarter. Awaiting completion of growing season(s) to determine results from other projects. Sales from 2a.1, 3, 4, 5, 6, 7, 8. and 9 to boost actual towards target.
- Indicator 2—Increase in employment in the agriculture/agribusiness sectors
  - Early measurements include the Anbar Maize Project) and the production of fingerlings at the Euphrates Fish Farm. Final results for the Anbar-Diyala wheat and barley contract farming project will be received in the coming quarter but preliminary figures are reported. Awaiting completion of growing season(s) to determine results from other projects. Employment from 2a.1, 3, 4, 5, 6, 7, 8. and 9 to boost actual towards target.
- SO8.2a—Increase crop diversity/livestock productivity
  - SO8.2a.1—Percentage of program trainees who say they have used their knowledge and skills to improve their productivity and can give examples

- Training curricula and materials complete for some subjects. Training commenced April, 2008 and included farmers, their wives and children, with over 11,000 reached in the quarter. Awaiting the setting and testing of the survey instrument to survey trainees.
- SO8.2a.2—Percentage of program assisted farmers selling produce through improved market linkages
  - Too early to measure. Awaiting completion of growing season(s) to determine. Meanwhile, linkages being put in place through renovation and opening of New Baghdad market and the establishment of area-wide grading and packing sheds.
- SO8.2a.3—Percentage of program-assisted farmers who participate in an out grower scheme (contract farmers) and can document that they are getting more income from their crops or livestock production
  - Demand for feed grains from 2a.7 expected to spur growth in feed grains production. Too early to measure. Awaiting completion of growing season(s) to determine. Inma to request a reordering of this indicator as not all assisted farmers will participate in out grower schemes. Percentage targets are attainable but the number of farmers participating must be reduced. Fish farming is a modified outgrowing scheme but too early to measure.
- SO8.2a.4— Percentage increase in gross sales of local red meat in five selected urban markets
  - Red meat value chain analysis determined sufficient consumer demand for red meat for sales to double if supply is available. To increase supply, feed mills and feed lots are being introduced. First Inma supported beef to market beginning of June, 2009. See 2a.5 for reason for time lag. Inma to request change in target for FY08 and EOP target.
- SO8.2a.5—Weekly production by commercial feedlots
  - An RFP for the establishment and operation feedlots is expected to be awarded by end of July, 2008. First feedlot(s) may be operational by September, 2008. Eight further months (end of May, 2008) before first beef ready for market. Weekly output thereafter. Inma to request change in target for FY08 but remains confident EOP target obtainable.
- SO8.2a.6—Total kilograms of fish from program assisted farms doubles (100%)
  - Receipt of 6,000,000 fingerlings from Euphrates Fish Farm distributed to 100 demonstration fish farms in Babil and a number of fish farm associations in the area. This target is likely to be achieved as Euphrates Fish Farm produced only 2,000,000 fingerlings last season. The number of fingerlings available to grow out has increased by 500% over last season's production. Even with mortality, increase in the use of good practices should lead to a substantial increase in the kilograms of fish for the project assisted farms. Inma will attempt to gauge the indirect impact of the program by seeing how many fish farmers follow Inma practices without Inma instruction.
- SO8.2a.7—Ten feed mills each produce 25,000 tons/year



this time and e-mailed to list of subscribers throughout country. A weekly summary is given of wholesale prices of dry goods, animal products and agricultural inputs. Plans are in place to expand radio broadcasting of pricing, to provide text messaging to traders and a weekly newspaper summary of all prices, and to survey the main agricultural governates at the district level to determine agricultural land usage so reports can be better tailored and focused.

- SO8.2c—Deliver sustainable technical programs for soil reclamation and water resources management
  - Inma will seek a revision to this IR eliminating those elements relating to soil reclamation. Inma, with the approval of USAID/Iraq, seeks to jump start the moribund agricultural sector in Iraq. It is not focused on the reclamation of soils or land but in the most efficient use of the agricultural resources currently available. As such, Inma feels soil reclamation should not be an area for which it is held accountable.
- SO8.2c.1—Program-assisted farmers who say they are benefiting from the water resources provided to them
  - Too early to measure. Awaiting the setting and testing of the survey instrument to survey farmers.
- SO8.2c.2—Program-assisted government officials and NGOs representatives who say they have knowledge and skills on canal reconstruction and repair
  - Too early to measure. Awaiting the setting and testing of the survey instrument to survey government officials and NGOs.
- SO8.2c.3—Percentage of government officials responsible for water management in the program-assisted areas who say they use the water management data system
  - Too early to measure. Awaiting the setting and testing of the survey instrument to survey government officials.
- SO8.2c.4—Percentage of program-assisted farmers who say they have learned new technologies and methodologies
  - Too early to measure. Awaiting the setting and testing of the survey instrument to survey farmers. In addition, Inma will seek to remove this indicator from the PMP as it is identical with indicator SO8,2b.2.
- SO2.8c.5—Number of project assisted irrigation command areas improved served by large canals and drains.
  - None to report to date.
- SO8.2c.6—Number of project assisted irrigation command areas improved based on direct pumping from the river into field canals.
  - One to date, reflected in PMP Report. Euphrates Fish Farm with renovation/replacement of four pumps each capable of delivering 4000 cubic meters of water per hour.

- SO8.2c.7—Number of project assisted irrigation command areas improved based on well irrigation
    - None to report to date. A project recently begun to install six water-pumping wind mills to supply feed lots and green houses.
  - SO8.2c.8—Number of hectares laser leveled for better irrigation within command irrigation areas.
    - For the reason stated in the beginning of this IR, Inma will seek to remove this Sub-IR indicator from the program.
  - SO8.2c.9—Percentage of hectares of program assisted areas with soil saline concentration suitable for viable and sustainable agricultural use.
    - For the reason stated in the beginning of this IR, Inma will seek to remove this Sub-IR indicator from the program.
- SO8.2d—Increase competitiveness of agribusiness enterprises
    - SO8.2d.1—Percentage of program-assisted association members who say they are benefiting from the association services provided to them
      - Too early to measure. Awaiting the setting and testing of the survey instrument to survey association members.
    - SO8.2d.2—Percentage of program-assisted association members trained to understand markets and farming profitability
      - Too early to measure. Awaiting the setting and testing of the survey instrument to survey association members.
    - SO8.2d.3—Percentage of program-assisted trainees who say they have used their new knowledge and skills and can give examples
      - Too early to measure. Awaiting the setting and testing of the survey instrument to survey farmers. In addition, Inma will seek to remove this indicator from the PMP as it is identical with indicator SO8,2a.1.
    - 8.2d.4—Increase the value of financial resources raised by program assisted enterprises (in US\$ millions)
      - Too early to measure. The grants to loan program is expected to contribute significantly to this indicator. Targets were revised to reflect the grants to loan program.
  - SO8.2e—Increase domestic and foreign partnerships to improve the commercial success of new and existing Iraqi agribusiness
    - SO8.2e.1—Percentage of program-assisted businesses benefiting from the value chain analyses
      - Too early to measure. Awaiting the setting and testing of the survey instrument to survey program-assisted businesses.
    - SO8.2e.2—Percentage of program-assisted businesses benefiting from market intelligence.
      - Too early to measure. Awaiting the setting and testing of the survey instrument to survey program-assisted businesses.
    - SO8.2e.3—Percentage of program-assisted businesses benefiting from sector formation

- Too early to measure. Awaiting the setting and testing of the survey instrument to survey program-assisted businesses.
- SO8.2e.4—Percentage of program-assisted businesses with Iraqi and/or international partners
  - Too early to measure. The key challenge to partnerships remains the fluid security situation. Inma will request a rewording and change in targets for this indicator.
- SO8.2e.5—Number of new business ownership relationships formed involving program-assisted businesses
  - Too early to measure. Inma feels this indicator is redundant to the indicator above and will seek the removal of this indicator.

# PERFORMANCE INDICATORS SUMMARY

Mission Level Indicators

FY 2008

Indicator	Measure	FY 07 Baseline	Q1	Q2	Q3	Q4	FY08 Target	FY 08 Actual	% Actual of Target
SO8.0--Indicator 1: Increase of total gross sales of program assisted enterprises	Number \$	0	43650	0	51400000	0	50000000	5183650	10.3%
SO8.0--Indicator 2: Increase employment in the agricultural/agribusiness sectors	Number	0	138	1494	01069	0	5000	2701	54%
SO8.2e.1—Percentage of program-assisted businesses benefiting from the value chain analyses	%	0	0	0	0	0	20%	0	0%
SO8.2e.2—Percentage of program-assisted businesses benefiting from market intelligence	%	0	0	0	0	0	20%	0	0%
SO8.2e.3—Percentage of program-assisted businesses benefiting from sector formation	%	0	0	0	0	0	20%	0	0%
SO8.2e.4—Percentage of program-assisted businesses with Iraqi and/or international partners	%	0	0	0	0	0	2%	0	0%
SO8.2e.5—Number of new business ownership relationships formed involving program-assisted businesses	Number	0	0	0	0	0	3	0	0%

**FY 2008**

Indicator	Measure	FY 07 Base line	Q1	Q2	Q3	Q4	FY08 Target	FY 08 Actual	% Actual of Target
SO8.2a.8—Percentage growth in gross sales of targeted fruits and vegetables	%	TBD	0	0	0	0	10%	0	0%
SO8.2b.3—Market Information System providing daily wholesale and international pricing of all agricultural commodities in all the primary markets across Iraq		None					System start up	System start up	N/A

FOCUS 2—Annual

**FY 2008**

Indicator	Measure	FY 07 Base line	Q1	Q2	Q3	Q4	FY08 Target	FY 08 Actual	% Actual of Target
SO8.2a.9—Gross sales of dates increase	%		0	0	0	0	25%	0	0%

FOCUS 3—Livestock and Feeds

**FY 2008**

Indicator	Measure	FY 07 Baseline	Q1	Q2	Q3	Q4	FY08 Target	FY 08 Actual	% Actual of Target
SO8.2a.4—Percentage increase in gross sales of local red meat in five selected urban markets	%	0	0	0	0	0	20%	0	0%
SO8.2a.5—Weekly production of head for market by commercial feedlots	Number	0	0	0	0	0	250	0	0%
SO8.2a.6—Total kilograms of fish from program assisted farms doubles (100%)	%	0	0	0	0	0	25%	0	0%
SO8.2a.7—Production by commercial feed mills: number of feed mills	Number	0	0	0	0	0	5	0	0%
SO8.2a.7a—Production by commercial feed mills: tons of animal feed/mill/year	Number	0	0	0	0	0	10000	0	0%

FOCUS 4—Cross-cutting Issues

FY 2008

Indicator	Measure	FY 07 Base- line	Q1	Q2	Q3	Q4	FY08 Target	FY 08 Actual	% Actual of Target
SO8.2a.1—Percentage of program trainees who say they have used their knowledge and skills to improve their productivity and can give examples	%	0	0	0	0	0	20%	0	0%
SO8.2a.2—Percentage of program assisted farmers selling produce through improved market linkages	%	0	0	0	0	0	20%	0	0
a) Number of program assisted farmers	Number	0	46	1052	0	0	1800	1098	61%
SO8.2a.3—Percentage of program-assisted farmers who participate in an outgrower scheme (contract farmers) and can document that they are getting more income from crops or livestock production	%	0	0	0	0	0	20%	0	0%
SO8.2b.1—Percentage of program-assisted farmers who say they have used the information systems to improve their knowledge and skills and can give examples	%	0	0	0	0	0	10%	0	0%
SO8.2b.2—Percentage of program-assisted farmers who use improved technology document that they are getting more income from their crops	%	0	0	0	0	0	15%	0	0%
SO8.2c.1—Program-assisted farmers who say they are benefiting from the water resources provided to them	Number	0	0	0	0	0	1000	0	0%
SO8.2c.2—Program-assisted government officials and NGOs representatives who say they have knowledge and skills on canal reconstruction and repair	Number	0	0	0	0	0	50	0	0%
SO8.2c.3—Percentage of government officials responsible for water management in the program-assisted areas who say they use the water management data system	%	0	0	0	0	0	10%	0	0%
SO8.2c.4—Percentage of program-assisted farmers who say they have learned new technologies and methodologies	%	0	0	0	0	0	15%	0	0%

SO2.8c.5—Number of project assisted irrigation command areas improved served by large canals and drains.	Number	0	0	0	0	0	1	0	0%
a) Kilometers of main and secondary canal cleaned;	Number	0	0	0	0	0	5	0	0%
b) Control structures within the canal renovated including installation of measuring devices;	Number	0	0	0	0	0	2	0	0%
c) Secondary canal diversions renovated with measuring devices installed;	Number	0	0	0	0	0	2	0	0%
d) Field canal inlets renovated and equipped with control structures;	Number	0	0	0	0	0	5	0	0%
e) Field canals operated and maintained by the producers;	Number	0	0	0	0	0	5	0	0%
f) Farm inlets installed in field canals	Number	0	0	0	0	0	100	0	0%
SO8.2c.6—Number of project assisted irrigation command areas improved based on direct pumping from the river into field canals.	Number	0	0	1	0	0	1	1	100%
a) Low lift pumping units renovated or replaced;	Number	0	0	4	0	0	5	4	80%
b)Field canals operated and maintained by the producer;	Number	0	0	4	0	0	5	4	80%
c) Farm inlets installed in the field canals.	Number	0	0	0	0	0	100	0	0%
SO8.2c.7—Number of project assisted irrigation command areas improved based on well irrigation	Number	0	0	0	0	0	1	0	0%
a) Low lift pumping units renovate	Number	0	0	0	0	0	5	0	0%
b) Farmers assisted in obtaining locally manufactured drip equipment with accessories.	Number	0	0	0	0	0	50	0	0%
SO8.2c.8—Number of hectares laser leveled for better irrigation within command irrigation zones.									
SO8.2c.9—Percentage of hectares of program assisted areas with soil saline concentration suitable for viable and sustainable agricultural use.	%	0	0	0	0	0	20%	0	0%

SO8.2d.1—Percentage of program-assisted association members who say they are benefiting from the association services provided to them	%	0	0	0	0	0	15%	0	0%
SO8.2d.2—Percentage of program-assisted association members trained to understand markets and farming profitability	%	0	0	0	0	0	15%	0	0%
SO8.2d.3—Percentage of program-assisted trainees who say they have used their new knowledge and skills and can give examples	%	0	0	0	0	0	10%	0	0%