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# *Inma* Agribusiness Program

## POMEGRANATE EXPORT TRIAL

Activities, Accomplishments, Value Chain Analysis, Lessons Learned, and Future Steps



**Inma**  
AGRIBUSINESS PROGRAM

November 30, 2008

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ACTIVITIES, ACCOMPLISHMENTS, VALUE CHAIN  
ANALYSIS, LESSONS LEARNED, AND FUTURE STEPS



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

## **DISCLAIMER**

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

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# BACKGROUND

In June 2008, the USAID/*Inma* Agribusiness Program launched a Pilot Pomegranate Export Trial Demonstration for the 2008 harvest season to assess the production potential, market competitiveness and consumer acceptance of Iraqi premium quality pomegranates at the regional wholesale market hub in Dubai. The Trial Export was scheduled to take place in the Kurdistan's governorate of Suleimaniyah during the period October - December 2008. The selected production area lies close to the Halabja region, where reportedly some 10,000 MT are produced annually. Other pomegranate producing areas in Iraq, such as Diyala and Karbala Governorates, were taken out of consideration due to persistent security problems which would have jeopardized developmental activities.

The main goal of the Pomegranate Export Trial was to test the technical and economic feasibility of commercial export of fresh Iraqi pomegranate to the wholesale market in Dubai. To date, the activity has yielded essential market intelligence to determine the Iraqi export potential for pomegranates, as well as for other agricultural perishables.

Specific objectives for the activity are:

- To set a precedent by the first-ever Iraqi pomegranate export trial and begin to establish a high profile brand for Iraqi products abroad, thereby encouraging Iraqi growers and traders to implement modern pre- and post-harvest methods to increase overall quality for domestic and export pomegranates, as well as other fresh agricultural products, beyond the life of *Inma's* support.
- On the demand side (Dubai market), to assess the potential, acceptance and competitiveness of Iraqi pomegranates, in terms of quality, price and price positioning.
- On the supply side, to assess procurement competitiveness for export quality product, and to demonstrate an integrated pre- and post-harvest field packaging operation in terms of operational feasibility.
- To determine operational and economic feasibility, while identifying and resolving constraints and bottlenecks in the export process.
- To identify opportunities to reduce transaction costs and add value within different segments of the marketing value chain to increase competitiveness in the export market.

This report examines the steps taken and lessons learned from the activity, key findings, a *posteriori* analysis of selected segments of the fresh pomegranate export marketing value chain for Iraq, evaluation of assumptions, recommendations and adjustments for further marketing trials in 2009. Findings are based on current data collected in the local market and in the field during the 2008 harvesting season. This report also summarizes findings related to the marketing process itself. These findings identify potential bottlenecks and required improvements in the process to reduce marketing transaction costs in the export of fresh produce.

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# IMPLEMENTED ACTIVITIES

- *Inma* identified a leading wholesale agent in Dubai ready to market 200 tons of premium quality pomegranates to be sold on consignment through the Dubai wholesale market for local consumption and for re-export. The Mirak Agricultural Services<sup>1</sup>, as a subsidiary of the Dubai-based Mirak Group, agreed to a commission fee of 20% for the first year<sup>2</sup> and 10% subsequently.
- *Inma* identified the Halabja Group in Sulaimaniyah as an Iraqi company with expert agricultural capability and appropriate field personnel to assume the responsibility for developing and implementing ground activities required for 2008 the Pilot Test.
- *Inma* competitively procured high quality cardboard boxes and separators, of a quality demanded by the export market, from Arabian Packaging Co. (L.L.C.) in UAE. These packaging materials were delivered to the Halabja Group warehouses on the 20<sup>th</sup> of November, 2008.<sup>3</sup>
- An agreement was reached with the Al Shehail L.L.C.<sup>4</sup> to provide air transportation for the pomegranate cargo from the Erbil International Airport to Sharjah and the Dubai International Airport.
- The following documents required for export were successfully obtained by the *Inma* team:
  - Export license, issued by the Ministry of Trade in Baghdad,
  - Extension of the export license for the month of December, issued by the Ministry of Trade in Baghdad,
  - Certificate of Origin, and
  - Export/customs documentation for shipment clearance at the Erbil and Dubai international airports from the customs offices in Kurdistan and UAE.
- Phytosanitary procedures for required documentation were successfully completed with the Plant Protection Department under the Iraqi Ministry of Agriculture. Arrangements were made for two inspectors from MOA-PPD to visit the Halabja region on November 22-25, 2008, accompanied by the *Inma* team.
- *Inma* developed and provided equipment for sorting and grading in the field.
- The *Inma* technical team provided the Halabja Group with product specifications for export *Class 1* and demonstrated how to calculate unit cost for export quality from field run procurement of raw materials. *Inma* monitored cost of raw materials during October and November crosschecking data with an independent source.<sup>5</sup>
- The Halabja Group contracted farmers in the Halabja Region for delivery of approximately 100 MT in November 2008 of export quality pomegranate.

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<sup>1</sup> Mirak Agricultural Services L.L.C. [www.mirakgroup.com](http://www.mirakgroup.com)

<sup>2</sup> The higher commission during the first year is customary for promotion of a new product introduction in a highly competitive market. The Dubai wholesale agents charge the higher 20% commission fee during the first year, for additional costs incurred in "listing" a new product. This is common practice in the Dubai wholesale market.

<sup>3</sup> Arabian Packaging Co. (L.L.C.) [www.arabpack.com](http://www.arabpack.com) Tel +971 4880 2555

<sup>4</sup> Al Shehail L.L.C. Cargo Center E-mail [aircargo@emirates.net.ae](mailto:aircargo@emirates.net.ae)

<sup>5</sup> Source: Acted NGO auditing price of pomegranate with three key wholesalers in Dubai. Maximum price is the highest in the market excluding boxes of 100% jumbo size. All prices determined as weighted average (on volumes sold).

- *Inma* monitored daily pomegranate prices and supply in Dubai and in the domestic market during the October-November, 2008 harvest season.

## EXPORT TRIAL RESULTS

The 2008 Export Trial was suspended on November 22, 2008 for the following reasons:

- **Low quality:** The available product for export was of insufficient quality to meet the “Class 1” standards of the Dubai market. The lower than expected raw material quality likely was partially due to adverse weather conditions in the area (heavy rainfalls) in the week of November 16-22, along with inadequate storage facilities available to farmers (i.e., lack of cold storage facilities).
- **High price:** Less than 15% of the product inspected by *Inma* was of the required “Class 1” export quality (percentage of product matching export standards). Such a low percentage of export quality yield significantly increases the cost of exportable product at the farm gate to approximately the anticipated selling price in Dubai and well above the farm gate ceiling price agreed by *Inma* with the Halabja Group.

The final decision to suspend the Pilot Export Trial until 2009 considered several key factors several key factors, including but not limited to the following reasons:

- To avoid projecting a negative image that Iraqis export low quality produce, not only of pomegranate, but of other products as well.
- To preserve the opportunity to create in 2009 a desirable positive image of Iraqi as an exporter of premium products.

## DEMAND FACTOR AND NET SALES

Top prices for high quality table pomegranates in the Dubai wholesale market during the entire 2008 season September - November<sup>6</sup> were on average \$2.34/kg. Top prices considering only the months of September and October were \$2.51/kg:

Period	Top Price \$/kg Dubai Wholesale	Mode Price <sup>7</sup> \$/kg Dubai Wholesale
<b>Dubai Wholesale Market</b>		
Entire Season September 11 - November 25	\$2.34	\$1.74
Season September 11 – October 31	\$2.51	\$1.80
Early Season September 11 – September 30	\$2.60	\$1.80
First Half October 1 – 15	\$2.57	\$1.86
Second Half October 16 – 31	\$2.29	\$1.76
October 1 - 31	\$2.42	\$1.80

<sup>6</sup> Source: Actual price charged by three key wholesalers in Dubai for export quality pomegranate. Maximum price is the highest in the market excluding boxes of 100% jumbo size (5 unit per carton). Prices were audited from September 11 throughout November 25.

<sup>7</sup> Mode value in statistics refers to the value of the highest frequency. Intervals of 5c were considered in the calculation of the mode price.

November 1 - 25	\$2.17	\$1.68
Peak Season December 15 – January 10	\$3.18	\$2.16

**Table 1: Wholesale market prices in Dubai for fresh pomegranate**

**Comments:**

The table above shows remarkable fluctuations for top price pomegranates in the market during the season: The best prices (\$2.60/kg) are in the early season of September 10-30 and in the first half of October (\$2.57/kg), while there is a considerable drop in price (\$2.29) in the second half of October and into November (\$2.17/kg).

Mode prices are remarkably stable throughout the season, within the range of \$1.68 and \$1.86/kg.

According to traders in Dubai, low price in November for top quality products may not be due to weak demand but are more likely to be because of a lower quality product in the market at the end of season (likely the result of inadequate storage conditions in the country of origin).

“Class 1” pomegranates from the Halabja region were positively evaluated by the *Inma* technical team in several field visits during October 2008. *The product is expected to command a price positioning in Dubai similar to the audited top price (highest in the market) in the table above.*

Since the harvest season in Halabja begins the first week of October and there is no cold storage available to extend the marketing season beyond November, the most realistic price reference for the Dubai market is the month of October (\$2.42/kg). In the economic analysis below, \$2.42/kg is considered as the most likely ceiling reference price achievable in Dubai at the wholesale market.

Many wholesale agents in Dubai typically work on a consignment basis with a commission fee of 10% of selling price. Net sales are calculated with subtraction of these 10% commission fee. Net sales for Halabja pomegranate is therefore projected to be \$2.18/kg.<sup>8</sup>

## **COST OF RAW MATERIAL**

The Pomegranate Export Trial was initiated on the assumption that *Class 1* pomegranates raw material (ready for shipment, graded and sorted) would be available at \$0.80/kg.

This assumption proved to be unrealistically optimistic, as calculations were made based on average price data instead of mode price, and the discrepancy between the local notion of *Class 1* produce and the export quality standards. The Halabja Group quoted \$1.50/kg as the price for procurement of *Class 1* pomegranates in October 2008 providing no further details or cost break-down.

<sup>8</sup> Only during the first year would Mirak (selected wholesaler in Dubai) charge a fee of 20%.

On the other hand, an independent source in the region bidding for export of pomegranates to Holland (with similar specifications) quoted a price range \$1.33/kg - \$1.21/kg based on five farmers consolidators/traders' proposals in the Halabja Region. The price of \$1.33/kg is based on IQD, \$1,35/kg at farm gate, with 75% quality rate (75% of product suitable for export) and 25% resold in the local market at ID600/kg. The price of \$1.21/kg is based on ID1,200/kg at farm gate with 70% quality rate and 30% resold in the domestic market at ID600/kg.

At a \$1.50/kg quote the Halabja Group apparently incorporated a high margin of risk in the \$1.50/kg price due to uncertainty in predicting actual *Class 1* quality yield. Cost of raw materials in the late season (November) increased due to quick product deterioration caused by adverse weather conditions and absence of proper cold storage. The *Inma* technical team visiting the region estimated that at that time less than 15% of the fruit matched export standard.

Cost of procurement in late November increased to \$2.70/kg, assuming only a 15% quality yield from field-run material bought at the farm gate for IQD1,000/kg (\$0.83/kg) and with discarded product (85%) resold in the local market at ID600/kg (\$0.50/kg).

Even in the most favorable month of October, the cost of procurement of quality pomegranates for export from the Halabja orchards stood realistically at no less than \$1.20 - \$1.30/kg, which is much higher than the originally expected \$0.80/kg

As shown in the economic analysis below, the procurement price for raw material (export quality) at around \$1.20/kg - currently the most competitive price in Halabja for export *Class 1* – is too high for a profitable export activity even assuming that the products will command top price (\$2.42/kg) in the Dubai wholesale market.

Data collected by the *Inma* team in the local market and Anka wholesale data for pomegranates collected Iraq-wide, both show that the Kurdistan region currently has the highest price level for pomegranates in Iraq:

Market/Product	Wholesale Price/kg	Comments
Kurdistan (Suleimaniyah and Erbil) - Anka average price October	IQD 1.100 (\$0.92)	Highest domestic price for pomegranate in Iraq
Karbala - Anka average price October	IQD 700 (\$0.50)	Untested quality, Karbala produce has an image of lower quality in average than produce from Halabja or Sulaimaniyah
Diyala - Anka average price October	IQD 800 (\$0.66)	Untested quality. Diyala produce has high reputation in Iraq
Suleimaniyah - Wholesale Market High quality price	IQD 1,500 (\$1.25)	<i>Inma</i> audited the wholesale market
Export Class 1 Suleimaniyah Consolidators (traders)	IQD 1,440 (\$1.20)	Prices ranged between \$1.50/kg (Halabja Group) to \$1.20 from independent source

**Table 2: Wholesale Domestic Prices in Iraq for Fresh Pomegranate**

One possible explanation for the high pomegranate price in Kurdistan and the Halabja region is the lower production in 2008. Based on data provided by the main Halabja farmers, supply of raw produce shrank by 15% on average vs. 2007, due to adverse weather conditions in the winter.

Export activity does create value for the farmers who normally sell their top quality in the domestic market in the range of \$0.80/kg while export markets pay a premium of 20% (Class 1 for \$1.00/kg).

## TRANSPORTATION

### Option 1: Air Cargo, Non-refrigerated

The Export Trial was designed to use air cargo as means of transport to deliver pomegranates to Dubai in order to enter the market as quickly as possible. Ground transportation in Iraq for shipment of perishable products remains time consuming and unreliable due to security issues. Air transportation from Suleimaniyah was ruled out because of the cost quoted at \$3.20/kg. Thus, *Inma* intended to arrange air shipment for this Trial only, assuming that as security improves, ground transport services will become more competitive, cost effective and reliable.

Prices for one-way air freight from Erbil International Airport to Dubai ranged between \$1.45/kg for unknown quality of service to \$1.80/kg for premium quality service. Additionally, the Erbil Airport charges \$100/ ton for unloading from a truck and loading into a cargo plane. The option of air transportation from Erbil International airport to Dubai must be utilized at the beginning of harvest to enter the Dubai market at the earliest date possible to maximize profits.

Overland transportation from Halabja to Erbil was estimated at \$30/MT, as quoted by several transport agencies operating in the region.

### Option 2: Overland, Refrigerated + Maritime (Ferry)

Refrigerated overland transportation (Suleimaniyah – Basrah) and refrigerated ferry transportation (Basrah to Dubai: four days) was quoted at \$0.94/kg (refrigerated container) excluding loading and unloading at the Basrah sea port, since the truck container must be unloaded and loaded in another ferry container.

### Option 3: Overland, Non-refrigerated + Maritime (Ferry)

Non-refrigerated transportation overland (Suleimaniyah – Basrah) + ferry transportation (Basrah to Dubai) was quoted by Suleimaniyah transport agencies at \$0.70/kg, plus loading and unloading at Basrah port.<sup>9</sup>

## PACKAGING

### Carton Boxes

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<sup>9</sup> Quotation obtained November 2008.

High quality, high resistance carton boxes are currently unavailable in Iraq and can be procured at around \$1.00/unit if imported from UAE by truck. To insure delivery of a “Class 1” product to export market, reduce cost of freight (stacked 12 high) and to extend shelf life of product, a high quality box must be used for export markets. When shipped to export markets, each box will contain in excess of 5kg of product; therefore, carton boxes account for \$0.20/kg.

A lower quality box at a lower cost can be procured in Iran and delivered to Iraq for approximately \$0.70/unit (\$0.14/kg) but will result in reduced quality of product, reduced shelf life and increased freight cost. Carton boxes made in Iraq do not match the export quality by required the Dubai wholesale agent and have been quoted \$1.27/unit.

### Pallets

Fruit export heavily depends on the availability of plastic and angular pallets which imply a considerable cost saving in transportation. Wooden pallets can be procured in Iraq for \$25/unit. Depending on layers of stacked boxes (8 to 12), each pallet may contain 320 to 480/kg. Assuming an average of 400kg/pallet, palletization cost accounts for \$0.05/kg (\$50/1000).

Items	Plastic Pallet	Wooden Pallet
Weight (kg)	9	23
Cost (\$/unit)	38.14	25
Air Transportation (\$2.6/kg)	23.4	59.8
Number of shipments	3	1
Average Cost (\$/Shipment)	20.51	82.8

The table above represents the usage of plastic pallets in reference to cost savings, amounting to \$60 saved per pallet per shipment.

### Shrink Wrap

Cost is estimated at \$30/MT per operation (\$0.03/kg). The estimate is based on 6m<sup>2</sup> per pallet.

## PROCESSING<sup>10</sup>

Processing costs (sorting, grading, and packaging) in Halabja have been estimated at \$45/MT with salary at \$10 per person a day, with productivity of approximately 250kg per person a day, possibly improvable in the future, with training. With salary at \$20 a day, processing costs may account for \$90/MT. It should be noted, with improved quality of fruit in an orchard, productivity of sorting and grading will increase thereby reducing processing cost.

<sup>10</sup> All estimates are based on previous experience of pomegranate export from Afghanistan. These estimates may not be applicable to Iraqi conditions. Inma will test these assumptions in the future.

# VALUE CHAIN ANALYSIS

## PROFITABILITY AND SUSTAINABILITY

The table below considers three different scenarios with regard to transportation:

- Air cargo,
- Refrigerated overland transportation to Basrah and maritime transportation from Basrah to Dubai, and
- Non-refrigerated overland transportation to Basrah and maritime transportation from Basrah to Dubai.

The table analyzes different scenarios with regard to net sales and costs:

- **Current:** Prices and Costs under current circumstances (closed best negotiations so far)
- **Improved:** Prices and Costs achievable under realistic circumstances (margin of improvement with extensive negotiations and favorable conditions, realistic cost savings)
- **Target:** Prices and costs that need to be achieved to make the business viable in the long term and profitable for an Iraqi exporter without *Inma* support (% margin targeted at  $\pm 20\%$  on Net Sales, based on exporters expectations).

	1	2	3	4	5	6	7
Profit & Loss by Scenarios all values \$/kg	Air Cargo Not Refrigerated Erbil - Dubai		Refrigerated Overland +Maritime via Basrah		Not Refrigerated Overland +Maritime via Basrah		
	Current	Improved	Current	Improved	Current	Improved	Target
Sales	2.42	2.42	2.42	2.42	2.42	2.42	2.42
<b>Net Sales</b>	<b>1.94</b>	<b>2.18</b>	<b>2.18</b>	<b>2.18</b>	<b>2.18</b>	<b>2.18</b>	<b>2.18</b>
<b>Raw material</b>	<b>1.5</b>	<b>1.2</b>	<b>1.5</b>	<b>1.2</b>	<b>1.5</b>	<b>1.2</b>	<b>0.8</b>
Air cargo (Erbil-Dubai)	1.8	1.3	0	0	0	0	0
Suleimaniyah - Erbil (Truck)	0.03	0.03	0	0	0	0	0
Erbil Airport Loading Costs	0.1	0.05	0	0	0	0	0
Overland + Maritime refrigerated Suleimaniyah -	0	0	0.94	0.94	0	0	0

Dubai							
Overland + Maritime Not Refrigerated Suleimaniyah - Dubai	0	0	0	0	0.7	0.7	0.6
<b>Total Transportation</b>	<b>1.93</b>	<b>1.38</b>	<b>0.94</b>	<b>0.94</b>	<b>0.7</b>	<b>0.7</b>	<b>0.6</b>
Carton boxes	0.2	0.14	0.2	0.14	0.2	0.14	0.14
Pallets	0.05	0.05	0.05	0.05	0.05	0.05	0.05
Shrink Wraps	0.025	0.05	0	0	0.1	0.1	0.1
<b>Total Packaging</b>	<b>0.275</b>	<b>0.24</b>	<b>0.25</b>	<b>0.19</b>	<b>0.35</b>	<b>0.29</b>	<b>0.29</b>
<b>Processing</b>	<b>0.05</b>	<b>0.03</b>	<b>0.03</b>	<b>0.05</b>	<b>0.03</b>	<b>0.05</b>	<b>0.03</b>
<b>Total Costs</b>	<b>3.755</b>	<b>2.85</b>	<b>2.72</b>	<b>2.38</b>	<b>2.58</b>	<b>2.24</b>	<b>1.72</b>
<b>Margin</b>	<b>-1.82</b>	<b>-0.67</b>	<b>-0.54</b>	<b>-0.20</b>	<b>-0.40</b>	<b>-0.06</b>	<b>0.46</b>
<b>% Margin on Net Sales</b>	<b>-94%</b>	<b>-31%</b>	<b>-25%</b>	<b>-9%</b>	<b>-18%</b>	<b>-3%</b>	<b>21%</b>

**Table 3: Projected Profitability of Pomegranate Export in different Scenarios**

## FINDINGS

### Air Cargo (Columns 1 and 2)

The Pomegranate Export Trial, under current circumstances with negotiated prices and favorable net sales estimate in Dubai, would generate a loss of \$1.82/kg (Column 1). Loss would be reduced to \$0.67/kg, taking into account all realistic possible cost savings (Column 2).

### Refrigerated, Overland + Maritime via Basrah (Columns 3 and 4)

Shift from air cargo to overland refrigerated transportation would considerably reduce losses, but it still operates within the red zone of \$0.54/kg under current circumstances (Column 3). Loss would be reduced to \$0.20/kg, taking into account all realistic possible cost savings (Column 4).

### Non-refrigerated, Overland + Maritime via Basrah (Columns 5 and 6)

Under conditions negotiated in the current Export Trial, overland refrigerated transportation would generate a loss of \$0.40/kg (Column 5). Break-even point would be achieved taking into account all realistic identified possible cost savings (Column 6).

In conclusion, targeted profitability (20% margin on net sales), can only be achieved assuming that:

- Net sales are at level of \$2.42/kg (a realistic assumption especially if early season of September is targeted).

- Raw material cost (in accordance with *class 1* export requirements) at \$0.80/kg, an assumption probably requiring extensive pre- and post-harvest techniques improvement to increase yield and productivity.
- Total cost of transportation at \$0.60/kg. This level of costs is only compatible with non-refrigerated transportation and possibly only achievable from geographic areas such as Karbala and Diyala, closer to the Basrah seaport.

## CONCLUSIONS

- No export of pomegranate is sustainable from Kurdistan region to Dubai with air cargo transportation. Refrigerated overland transportation, although cheaper, is still not a viable solution, based on quotations obtained in August 2008.<sup>11</sup>
- The only viable alternative with some potential in future to achieve a break-even point is overland non-refrigerated transportation.
- The cost of raw material in the Halabja region of the required export quality is much higher than expected under the original assumptions. The Anka-audited domestic wholesale prices for pomegranates in the Kurdistan region are the highest in Iraq, and significantly higher than in Karbala and Diyala.
- Business sustainability may well depend on a combination of factors:
  - To utilize the early season (September) to enter the Dubai market, when market prices are higher.
  - Transportation costs (truck + ferry) should not exceed \$0.60/kg, a cost achievable only by overland not-refrigerated transportation.
- Procurement of raw material (in accordance to Dubai “*Class1*” export specification) should be around or not exceeding \$0.80/kg
- Price gaps in the Iraqi domestic market suggest that there may be a potential for profitable inter-regional transactions:
  - from Suleimaniyah to Baghdad, where premium quality pomegranate is in short supply, and <sup>12</sup>
  - from Karbala to the north of Iraq in the early season (September), partially substituting the present imports from Syria.

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<sup>11</sup> Quotations excluded costs of trans-shipment (loading-unloading-reloading in the Basrah port).

<sup>12</sup> Reportedly high quality supply from Diyala is limited likely due to security factors.

## MAIN ACHIEVEMENTS

The Export Trial effort enabled *Inma* to identify weak links in the pomegranate value chain in Iraq. In the process, the Program achieved important results:

- *Inma* introduced standards and specifications for *Class 1* quality pomegranates in the Kurdistan region, in accord with export market requirements.
- *Inma* introduced market standards of high quality packaging (carton boxes) in accord to export market requirements. In addition, quality packaging minimizes transportation costs. Samples of imported carton boxes for the Trial are presently under examination in an Iraqi carton factory and are used as a benchmark/model to determine the factory's quality and price of manufacture..
- *Inma* demonstrated the technical possibility to export perishable produce from Suleimaniyah and Erbil, contributing to the establishment of best practices and manual of operation with the airport authorities of the Erbil International Airport and Suleimaniyah International Airport.
- In cooperation with MOA and the Department of Plant Protection, *Inma* developed more flexible procedures for phytosanitary certification not requiring the presence of the inspectors at shipment. The concept of inspection at the source was to be put into practice during the Export Trial.
- *Inma* collected market intelligence and realistic market costs to determine the best options for pomegranate export sustainability.
- *Inma* clearly identified pre and post-harvest developmental opportunities in the Halabja region, such as pruning, fertilization, sorting, grading and packaging, to increase the competitiveness of the product in terms of increased yields, improved quality and lower production cost. will

## NEXT STEPS

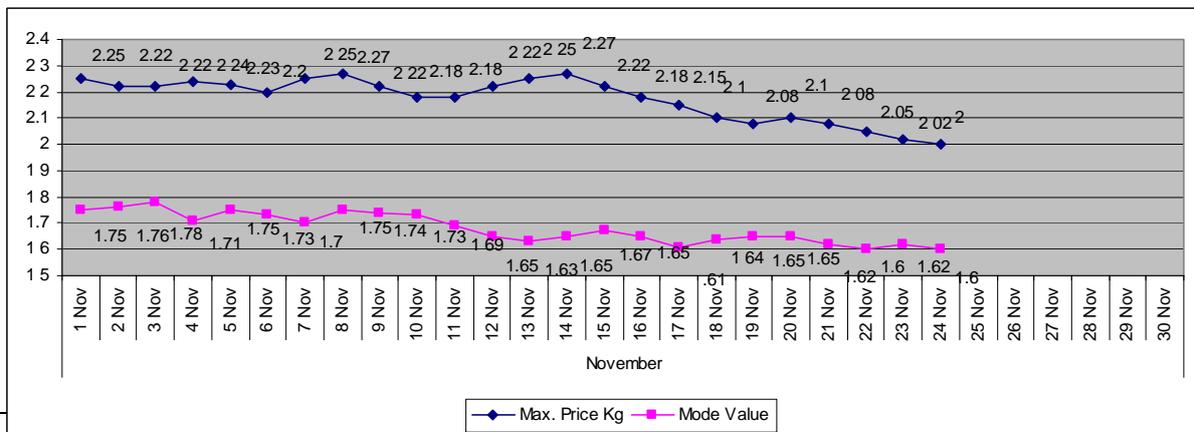
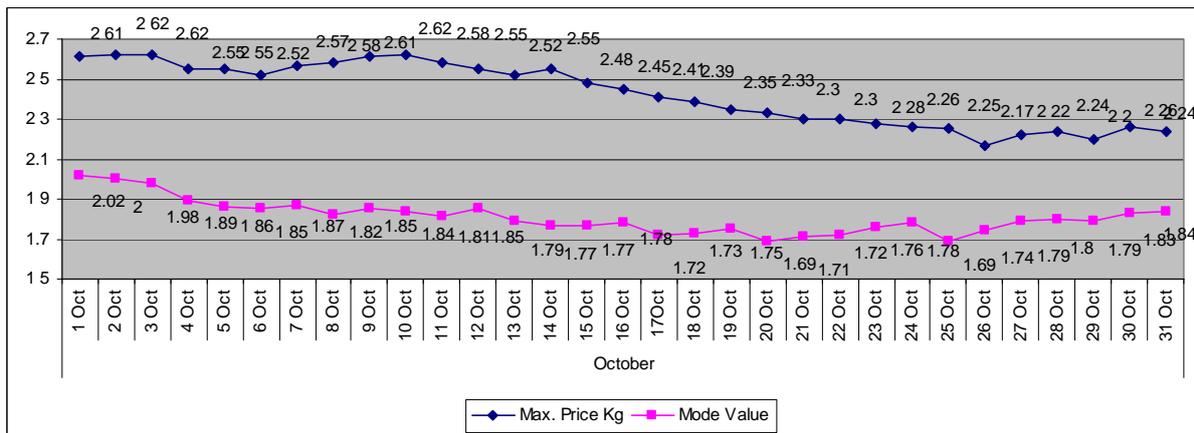
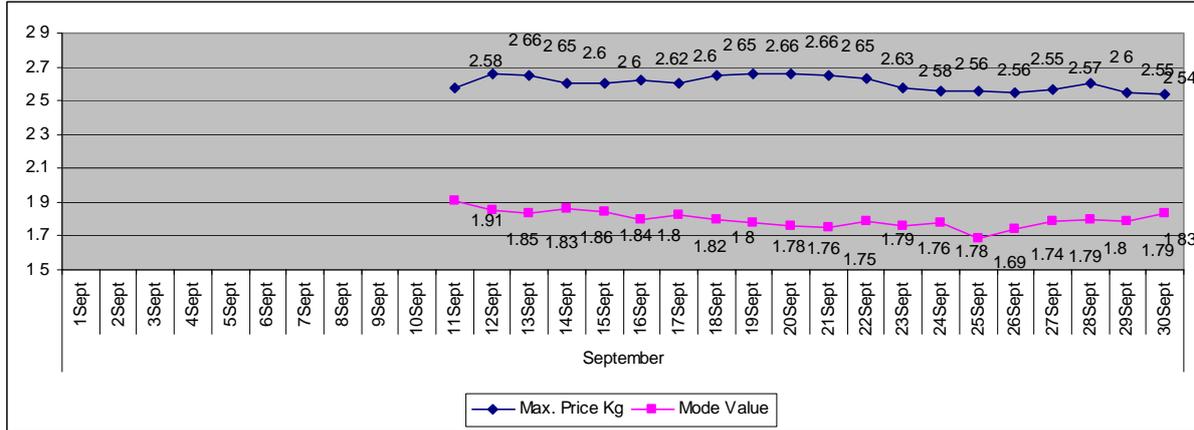
- The implementation of the Pomegranate Export Trial with produce from the Halabja region is still recommended for next season, although it is not likely to be commercially sustainable venture, even with utilization of the less costly overland transportation.
- The **primary objective** of such trial is to penetrate the market and breach the decades-long isolation of Iraq by the precedent of premium pomegranate export to the regional market hub in Dubai.
- This **promotional activity** will create a positive image of Iraqi products, create demand, and establish confidence among Dubai market agents and traders. Such a first-time promotion is likely to facilitate market penetration for other Iraqi private businesses as well, and may bring foreign investment into Iraq. Export of pomegranate to the Gulf region has a symbolic value for the Iraqi export sector and will contribute to creating new business links and investment opportunities between key agribusiness companies in Iraq and counterparts in the Gulf region.
- The 2009 Trial Export must be considered as a non-commercial promotional activity.
- A feasibility study on optional pomegranate export from Karbala should be performed, due to the lower prices of raw materials and transport costs in the governorate but also to determine the quality of the product produced in region.
- Hands on training and developmental initiatives in pre and post-harvest techniques should be implemented in a timely manner. The training curriculum and the assistance provided to pomegranate growers should include the following:
  - a. *Pruning* should start in late January or at the end of February, depending on the severity of the winter, and continue into early March.
  - b. *Orchard evaluation*: Inma specialists should evaluate the condition of each individual orchard and develop a fertilization program in accordance to the age and the condition of the trees, the irrigation status, and inter-planting status.
  - c. Basic improvements of the available irrigation systems, i.e., improved furrow, frequency of irrigation, improved irrigation schedule.

- d. Improvement of condition of orchard floors, i.e., to smooth or level the floors, and to reduce weeds.
- e. Pest control, .i.e., dormant spray (control scale), removal of old leaves and dead wood to reduce hosts for over-wintering pest, evaluate crop inter-planting, if any, among the rest.

The aforementioned pre-harvest techniques will be implemented in demonstration plots in the orchards of Karbala and Halabja, and compared to a control sample to evaluate their impact on yields and quality.

- Market test should be performed to assess the demand potential for:
  - a. Suleimaniyah premium pomegranate sales in the Baghdad market
  - b. Karbala pomegranate sales in northern Iraq in the early season (September).

# APPENDIX: Pomegranate Prices In Dubai September – November 2008<sup>13</sup>



<sup>13</sup> Max. Price = Highest Price in the Market excluding 100% jumbo size 5 unit/carton  
 Mode = Value with the highest frequency calculated in bands of 5c.