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Inma Agribusiness Program

Iraq – a Strategy for Pomegranate



Inma
AGRIBUSINESS PROGRAM

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Iraq – a Strategy for Pomegranate



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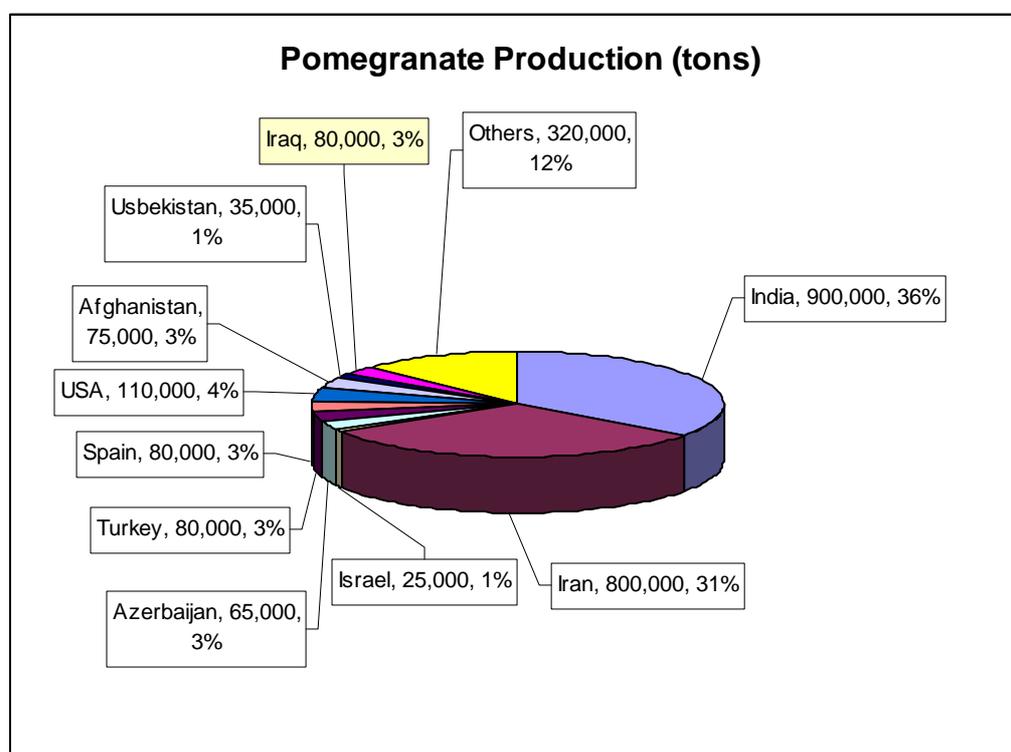
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1. Background

1.1 WORLDWIDE OUTLOOK

The global figure for trade in pomegranate can at best only be estimated, considering that the data for disaggregated level through most of the widely used statistics (COMTRADE, FAS USA, EuroStatistics) is only available at 6 digit HS code. Pomegranate and pomegranate juice come respectively at the 8 digit HS under 6 digit code 081090 (other fresh fruit) and code 200980 (juice of any other single fruit and vegetable).

Data on pomegranate (fresh and juice) production and trade must therefore be built on traders information and the few councils in place.



Source: FAS US – Spain and Iran Pomegranate Boards year 2007

Key-learning

- India is currently – with 900.000 MT - the biggest worldwide produce of pomegranate fruit, of which an estimated 25% are wild trees with little commercial output value. India focus is on export of fresh (table) pomegranate fruit to Dubai to be re-exported mainly to Asia (Korea, Singapore, Hong Kong, Japan) and Canada. Indian main export market is Dubai where some 17.000 MT have been shipped in 2007 mainly of high quality “soft-seed” varieties (Ganesh or Ruby, Bhagwa, Mridula, Arakta), followed by the EU27 (UK, Netherlands and Belgium) with approximately 3.000 MT.

- Iran is a relatively small exporter of fresh (table) pomegranate fruit despite a strong production level equal to 800.000 MT/year. Exports of fresh pomegranate from Iran are mainly directed to Europe (approximately 12.000 MT in 2007). Over the last seven years Iran has focused on pomegranate concentrate juice processing (65°brix) adding 11 plants of an average capacity of 10mt/h to the five already existing. Iranians reportedly currently produce some 35.000 MT of concentrate juice of which reportedly 25.000 are exported to Europe, Canada and USA and to a lesser extent to Asian countries.
- Spain is, as expected, the main supplier of fresh pomegranate in Europe which absorbs 95% of an estimated production of 80.000 MT.
- Recently new players – namely Afghanistan, Azerbaijan and Uzbekistan - have more recently joined the international export market of pomegranate:
 - Afghanistan focuses on high value/special variety of fresh fruit, directed to the hub center of Dubai competing mainly with India (650 MT exports in 2007).
 - Azerbaijan has now four state of the art processing factories of concentrate juice competing (largely in price) with Iran.
 - Uzbekistan targeted mainly the Russian market with fresh and concentrate juice (two new plants for concentrate have been built in the period 2005-2007) with little presence in any other market.
- USA, where a real boom of pomegranate juice (fresh and concentrate) took place since 2004 has been rather slow in adapting supply to a growing demand. Nevertheless there are reliable reports pomegranate planted acreage has jumped from 9.000 in 2005 to almost 14.000 in 2008.¹ Supply is likely to increase considerably taking into account pomegranate trees begin bearing an economic crop in the third year after planting while yield maturity is not reached until the sixth year.

1.2 SUPPLY - DEMAND OUTLOOK

Although no official statistics are available, information based on trader's and Pomegranate councils² outline the following conclusions:

- Pomegranate has enjoyed a rapid increase in demand in the international marketplace since 2004 because of recent findings that they contain a very high level of anti-oxidants, which are found to reduce risk of cancer, heart disease and other maladies.
- Worldwide supply – both for fresh and concentrate – of pomegranate is catching up with demand mainly due to and expansion of production for fresh in USA and new capacities for concentrate in Iran and Azerbaijan.
- Worldwide demand for pomegranates has been driven mainly by a booming demand in USA (both for fresh and concentrate) where supply has been slow to react, by a peak of demand (defined by analysts more as a fad rather than a trend) for juice in

¹ Overwhelmingly in the San Joaquin valley in California.

² Pomegranate councils in Spain and USA.

Europe (mainly UK) and by growing demand in Asia for “soft seeds” fresh fruit. According to the Spanish Pomegranate Council in Alicante demand for pomegranate in Europe has considerably slowed down in 2007 casting doubts over possible sustainable growth. American demand for fresh and concentrate is likely to remain robust in the next five years but mainly satisfied by Californian production rather than imports. Asian demand for “soft seed fruit” is likely to remain robust over the next five years.

Prices of concentrate juice (65 °Brix) have consistently decreased in the last two years despite a weak dollar. There are currently in the market many selling positions at \$4.800/MT EXW³ from Iran, Uzbekistan and Azerbaijan, a sliding price level never reached in 2007. Low quality juice is available for \$3.500/MT.

The pomegranate concentrate industry has gone through a considerable increase of capacity with eleven reported new factories built only in the last two years⁴. The market show now early signs of overcapacity with predominance of selling positions.

1.2 IRAQ STATUS

Official statistics for the Iraqi production and consumption of pomegranate are largely unreliable, faulty or nonexistent. Key players in the market estimate Iraq's 2006 production at some 100-120.000MT, although only 80.000MT are commercially suitable. Pomegranate is one of the few high value perennial fruits that Iraq has the potential to add-value and export by processing of 60-65 °Brix⁵ juice. It can also be exported in its form, if post harvest handling and packaging is improved to match with the regional competitors. In Iraq pomegranate is produced in Diyala, Karbla, Hillah, Kikuk, Sulaymania and Duhok governorates. However, bulk of the production reportedly comes from Diyala governorate (Sharaban) and Halabjah (Sulaimanyah). According to the Iraq Agricultural Statistics Yearbook 2005, Iraq produced 117,000 MT of pomegranate on an area of 30,000 ha with an average production of 39.0 MT/ha. Domestic consumption of pomegranate in Iraq is very low as compared to the production generating a surplus and market prices at farm gates much lower than in Iran.⁶ Low demand during the peak production seasons pushes the farm gate price to as low as \$200/MT. Top quality table pomegranate was sold in the last season at farm gates at a price ranging from ID 700 (\$0.58) to ID 1,000 (\$0.83). Presently, Iraq lacks post harvest handling techniques and facilities that can help commercial pomegranate processing and value adding for exports. Also, despite an overall popular belief Iraqi pomegranate are some of the best quality in the entire Middle East, there are no clear data on varieties although the predominant is clearly the Salakhany (reportedly accounting for almost 90% of the production).

³ EXW = Ex works means that the seller fulfills its obligation to deliver when it has made the goods available at its premises (i.e. works, factory, warehouse, etc). Unless otherwise agreed, the seller is not responsible for clearing the goods for export.

⁴ Source: Bertuzzi manufacturer in Brugherio – Milano – Italy.

⁵ Brix (°Bx) indicates the percent of cane sugar (sucrose) by weight (grams per 100 milliliter of water) in a solution or juice. A 65 °Brix solution means 65 grams of sucrose sugar and 35 grams of water in the 100 grams of solution.

⁶ Iran farm gate price in 2007 for pomegranate minimum 15 °Brix was \$0.38/kg, while in Iraq, preliminary enquiries conducted by Inma staff indicates a price as low as \$0.20.

The low farm gate price and surplus production justifies looking at possibilities for pomegranate export in fresh form as well as in concentrating juice. The processing of pomegranate and export may have positive impacts on the farm income and employment generation.

A preliminary market research conducted by INMA staff in the field indicates Diyala province probably produces conservatively 50-60.000MT a quantity close to 50% of Iraq's total production while the Northern governorates would account for 20.30.000MT and Kerbala and Najaf for another 15.000MT.

There are no data available on varieties and an overall consensus, among growers, predominant varieties fall under the "soft seed" classification who dominate the export markets in Dubai.

2. Inma Strategy

Inma's strategy builds on preliminary meetings with pomegranate traders in Dubai, data of Bertuzzi (an Italian leading manufacturer of pomegranate juice machinery) and local knowledge of today's Iraqi pomegranate status.

In principle four possible value chains have been identified:

1. The construction of a new factory for concentrate juice in Diyala

2. Sorted and graded fresh pomegranate exports to Dubai

3. Bulk pomegranate exports to Dubai for processing

4. Fresh juice for the domestic market.

2.1 PROCESSING FACTORY FOR CONCENTRATED JUICE

The processing

The processing involves washing, sorting, juice extraction, enzyme treatment, ultrafiltration, evaporation and sterilization, and filling and packaging. The product is stored and transported at a range between -18 °C and -5 °C. The whole process requires 23 workers including the 7 skilled workers. Pomegranate juice processing is complex and specific. The processing line is in fact not suitable for any other processing unless a considerable

investment is added to it. A line for 10MT/hrs costs \$3.2 million, while a line for 5MT/hrs is about \$2.7 million. Average juice yield is 43%, depending on the type of raw material (peel thickness, aril size, seed size, etc.). The fresh pomegranates have 15°Brix, and it has to be concentrated up to 65°Brix. This means 4 liter of 15°Brix juice would be reduced to 1 liter of 60°Brix. Thus, roughly 10 MT of raw pomegranate would produce one MT of 65°Brix juice.

Iraq roughly produces 117,000 MT of pomegranate annually. A plant with 10MT/hr processing capacity can process 25% (29.250MT) of the total production in 120 days if it runs for 24 hrs a day. Pomegranate production season in Iraq lasts for four months (from September to January). It can safely be assumed that a 10 MT/hr capacity processing plant can process 24.000 MT to produce 2.400 MT of 65 °Brix juice in a season, if raw pomegranate is available.

Machinery and building costs

The cost for the 10 MT/hr capacity processing plant came from the BERTUZZI FOOD PROCESSING⁷, which is one of the qualified manufacturers in the world and has recently supplied the equipment to Azerbaijan and Iran. Apart from the processing plant three generators of 120 KVA with 1500 rpm and a boiler are required. The Inma Engineering section estimates an area of 1000 m² for the processing plant and 720m³ for the cold storage. The total capital cost is estimated to be \$4.115.000.

Capital costs for 10 MT/hr capacity processing plant.

Item	Price (\$)
Processing line 10MT/hr capacity	3.200.000
Boiler	150.000
Generators, 3 (120 KVA)	240.000
Building (30m X 30M x 8M)	400.000
Cold storage (15M X 12M X 4M)	125.000
Total	4.115.000

Fixed costs

Fixed costs associated with the proposed pomegranate juice processing plant include the year around staff, supplies and utilities, and amortization and interest on the investment funds. The projected fixed costs for this project are \$663.000. Amortization and interest on the investment is the major cost, which is 85% of the total fixed operation costs. The Manager and the Assistant Manger receive an annual salary of \$20.400 with responsibilities of scheduling labor, harvesting, planting, ordering input supplies, and marketing. A bookkeeper will be required to assist the managers in maintaining accounts and other records.

Fixed operating costs

Item	Per month (\$)	Per year (\$)
Manager	1.000	12.000
Assistant Manager	700	8.400
Bookkeeper	500	6.000

⁷ BERTUZZI FOOD PROCESSING S.R.L. viale Lombardia 298 / 300 20047 Brugherio (MI) – Italy, phone: +39 039 28 71 983, fax: +39 039 88 32 05, e-mail: comm4@bertuzzi.it

Guards, 1 position	500	6.000
Cleaning maids, 1 position	400	4.800
Driver 1 positions (\$ 400 each)	1.200	4.800
Office supplies and utilities	2.000	24.000
Other fixed costs	3.000	36.000
Financial charges (amortization plus interest on the working capital)	43.333	520.000
Total Fixed costs		663.000

Variable costs

Variable costs associated with this project include labor, energy, product transportation, sale commissions and other costs. Energy, product transportation and commissions are the major costs and contribute 87% to the total variable costs. The warehouse supplies include product storage tanks, cleaning material, and enzymes and preservative.

Variable costs, 3 shifts daily for 4 months

Item	Per month (\$)	Per 4 month (\$)
Line supervisors, 7 persons each shift (\$ 700 each person)	14.700	58.800
Unskilled labor, 18 persons each shift (\$300 each person)	16.200	64.800
Energy (diesel 6,700/day @0.8/L)	160.800	643.200
Product transportation	120.000	480.000
Commissions	100.000	400.000
Other costs	25.000	100.000
Total variable costs		1.746.800

Direct Labor

Labor cost calculations include the salaries on a month base of both skilled and unskilled labor to run processing plant. The regular hours of operation are 8 hours per day, for 120 minimum days of the season. Personnel required for a 10 t/h line is approximately 25, which splits up as: 5 workers for 5 fruit receiving / washing lines, 6 workers for 6 sorting lines, 1 supervisor for extraction line, 1 supervisor for enzymatic treatment, 1 skilled person for ultra filtration plant, 1 supervisor for evaporation/sterilization line, 5 workers for 5 aseptic filling lines, 1 worker for bringing in empty drums, 2 for each filling head , 1 worker for drum closing, 1-2 workers for pallet stocking/forklift. In addition to that 1 laboratory technologist, 1 skilled mechanic and 1 electrician would be required. All the staff is replicated in 3 shifts/day of 8 hour each. The total skilled and unskilled labor cost is \$123.600.

Energy

Energy consumption is in the following three forms:

Energy for the plant: Average energy consumption for the processing plant of 10MT/hr is estimated to be 330KW/hr. Three generators of 120 KVA would be required to run the plant at a diesel consumption of 20 liters/day. Assuming 20 operating hours per day the total requirement for 120 days would be 144.00 liters. With an average per liter cost of \$0.80 the amount required would be \$115.200.

Energy for the boiler: Major energy consumption would be to reduce the original extracted juice to its 1/4th volume through evaporation. The estimated steam consumption for evaporation is 4205 kg/hr, which is equal to 84.100 kg/day. This corresponds to approximate diesel consumption of 5,500 liter/day, which would cost \$528.000 for 120 days.

Energy for the cold storage: A cold storage of 50m² would be required to accommodate 50MT of juice concentrate and for maintaining temperature between -18 °C and -5 °C. The energy consumption for the cold storage has already been assumed in the fuel consumption to run the three generators.

Product transportation

It is difficult to assess the actual cost for the product transportation since route of transportation is unknown. The most economical route could be shipment through Um Qasar port in Basra. At present this route is almost inaccessible due to security risks. However, a sufficient amount (\$480.000) is assumed in P/L analysis table.

Commissions

Largest component of commissions is the marketing fee for exports and domestic consumption. The domestic consumption is estimated in the range of 10-5% of the total juice production. The commissions also include the intermediate fee to be paid for purchase of pomegranates from areas other than Diyala. Total commissions would be \$400.000, which is 3.5% of the total revenue.

Raw material

The information gathered through the local farmers and the market dealers suggests farm gate price in the range of \$1500/MT to \$350/MT. However for the purpose of feasibility analysis a farm gate price of \$300/MT is assumed. Multiplying the expected yield by the farm gate price produces a direct cost of \$7.200.000 for 24.000 MT the raw pomegranate to be consumed during a four month processing season, @200 MT/day. A small fee is placed into the cost of product transportation under the variable costs for those uncertain times when the raw material may have to be transported from areas other than Diyala governorate.

Working capital

Apart from the capital costs of machinery and building, a working capital of one million USD would be required to carry out the business. In total an investment of five million USD would be required to initiate the activity.

Other direct costs

Other direct costs make up the remaining variable costs, which include warehouse supplies (product storage tanks/boxes, cleaning material, enzymes etc), utilities (water and electricity), and repairs. The total for this category is \$100.000.

Total net sales

Calculated income came from the estimated quantity of concentrated juice to be produced and multiplied by the per MT sale price of the total product. The current price per MT ranges

between \$4,800 and \$5,500. The estimated yield is 2400 MT, which will result in a total net sales of \$11,520,000 by considering a market price of \$4,800/MT. The income is highly dependent on availability and price of the raw material, and sale price of the product.

Profit / Loss analysis

Profit and loss analysis is presented in P/L table below with the following assumptions: that the pomegranate juice processing line will have a pomegranate processing capacity of 200 MT per day, that the processing season will consist of 4 months/year, that the farm gate price of pomegranate is \$300/MT or less, and that the wholesale market price the product is \$4,800/MT or more. The estimated operational profit is \$1,944,400 (16.8% on total net sales) with an IRR of 36% over a period of seven years (a reasonable level of profitability in food processing).

P/L Table

Pomegranate juice processing	US \$	%
Net sales juice	11.520.000	100.00
Cost of product sold	8.073.,600	70.08
Raw material	7.200.000	62.50
Energy	650.000	5.64
Labor	123.600	1.07
Other running costs	100.000	0.87
Gross Margin	3.446.400	29.92
		0
Sales and Marketing	880.000	7.64
Commissions	400.000	3.47
Product Transportation	480.000	4.17
		0.00
Financial charges on working capital and Amortization⁸	520.000	4.51
Administration Costs	102.000	0.89
Salaries	42.000	0.36
Office supplies	24.000	0.21
Other	36.000	0.31
Operational Profit	1.944.400	16.88

Sensitivity analysis

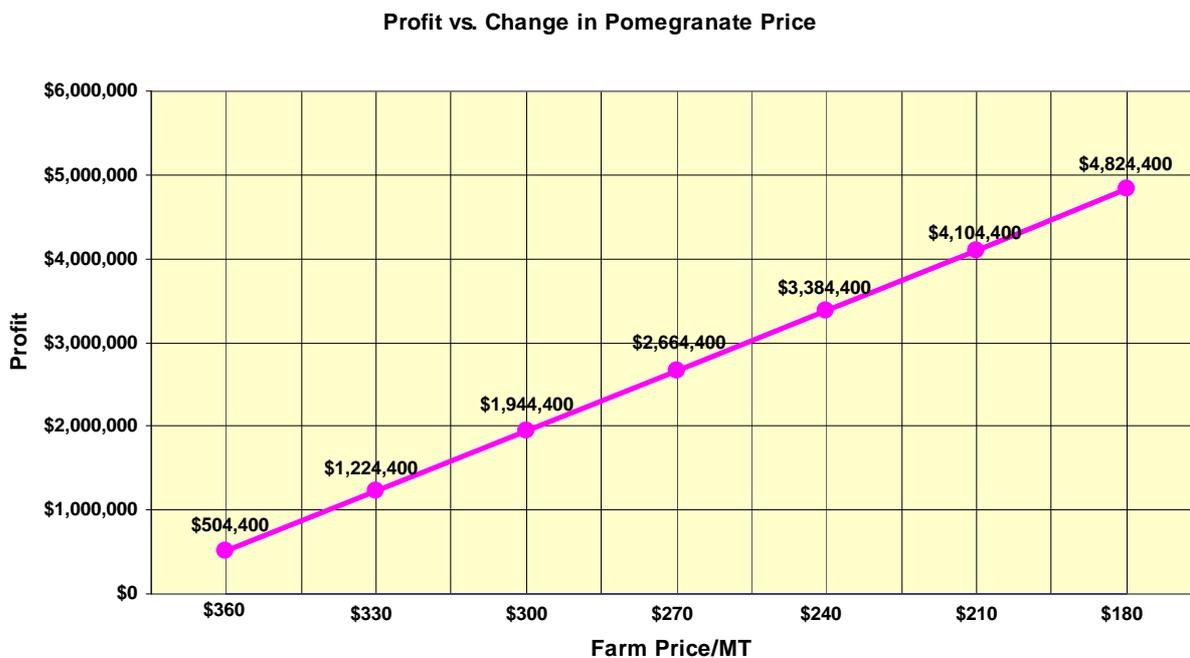
The price sensitivity for the raw material is depicted in Chart 1.

⁸ Amortization of 10 years for the equipment, 20 years for the building.

On the cost side the business makes virtually no profit when raw material is available at above \$360/MT.

On the market side the profit remains to significant levels till the product is sold at or above \$4.500/MT and break-even at \$4.000/MT.

Chart 1 Profit versus Change in Price Paid to the Producers.



Attempted cash flow and profit and Loss for a pomegranate juice processing plant in Iraq

Total Investment 5,000,000

Year	1		2		3		4		5		6		7	
Quantity	1,600		2,000		2,400		2,500		2,500		2,500		2,500	
Gross Sales	7,680,000		9,600,000		11,520,000		12,000,000		12,000,000		12,000,000		12,000,000	
Transportation	691,200		864,000		1,036,800		1,080,000		1,080,000		1,080,000		1,080,000	
Net sales	6,988,800	100%	8,736,000	100%	10,483,200	100%	10,920,000	100%	10,920,000	100%	10,920,000	100%	10,920,000	100%
Raw Material	4,800,000	68.7%	6,000,000	68.7%	7,200,000	68.7%	7,500,000	68.7%	7,500,000	68.7%	7,500,000	68.7%	7,500,000	68.7%
Processing	584,000	8.4%	730,000	8.4%	876,000	8.4%	912,500	8.4%	912,500	8.4%	912,500	8.4%	912,500	8.4%
Packaging	153,600	2.2%	192,000	2.2%	230,400	2.2%	240,000	2.2%	240,000	2.2%	240,000	2.2%	240,000	2.2%
Storage	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%
Amortization	520,000	7.4%	520,000	6.0%	520,000	5.0%	520,000	4.8%	520,000	4.8%	520,000	4.8%	520,000	4.8%
Gross Margin	931,200	13.3%	1,294,000	14.8%	1,656,800	15.8%	1,747,500	16.0%	1,747,500	16.0%	1,747,500	16.0%	1,747,500	16.0%
Overheads	400,000	5.7%	400,000	4.6%	400,000	3.8%	400,000	3.7%	500,000	4.6%	500,000	4.6%	500,000	4.6%
Operational Profit	531,200	7.6%	894,000	10.2%	1,256,800	12.0%	1,347,500	12.3%	1,247,500	11.4%	1,247,500	11.4%	1,247,500	11.4%
Cash Flow	1,051,200		1,414,000		1,776,800		1,867,500		1,767,500		1,767,500		1,767,500	
Net cash Expenses	-3,948,800		1,414,000		1,776,800		1,867,500		1,767,500		1,767,500		1,767,500	

IRR=36%

SWOT ANALYSIS – JUICE FACTORY IN IRAQ

Strengths	Opportunities
<ul style="list-style-type: none"> • Competitive raw material 	<ul style="list-style-type: none"> • Complete absorption of low quality fruit
Weaknesses	Risks
<ul style="list-style-type: none"> • High investment (> \$5.0 million) • Lack of plant versatility to process different fruits 	<ul style="list-style-type: none"> • Falling international prices for concentrate • Incipient oversupply • Price competition from Iran and Azerbaijan

2.2 FRESH POMEGRANATE EXPORTED TO DUBAI

Competition for fresh pomegranate in Dubai (re-export mainly to Asian countries) seems to be driven more by quality (suitable varieties soft seeds) than prices. Furthermore the market is currently controlled by Indian traders dealing with Indian product and established varieties enjoying consumer acceptance and trade franchise.

Afghanistan has recently entered the same segment (via Indian traders) exporting approximately 650 tons (farm gate \$1.20).

In order to compete in this market suitable varieties are required along with state of the art grading, sorting and post-harvest technique. Preliminary Inma analysis showed there are focus areas with production surplus and suitable varieties in Sharaban (Diyala), Halabja (Sulaimanyah) and Karbala. Prices for top quality range from ID 800/kg to ID 1000/kg.

Transportation cost could possibly represent a competitive advantage⁹ for Iraq in comparison to India and Afghanistan. The assumption for Iraq is overland shipment via Saudi Arabia (1,400 km to Dubai) or ferry via Basrah. Air freight from Baghdad and Sulaimanyah will also be quoted. Current best quotation via Basrah is about \$0.55/kg.

SWOT ANALYSIS – SORTED AND GRADED FRESH POMEGRANATES EXPORTS TO DUBAI

Strengths	Opportunities
<ul style="list-style-type: none"> • Competitive raw material at farm gates 	<ul style="list-style-type: none"> • Establish a position in “good value for money” • Establish the lucrative “jumbo size” niche segment (700g)
Weaknesses	Risks
<ul style="list-style-type: none"> • Current lack of grading and sorting philosophy and insufficient post-harvest technique in place 	<ul style="list-style-type: none"> • Low volumes • Current transportation costs (due to security) • Presence of suitable varieties in size and product specifications

⁹ Assuming the absence of “extra security” costs.

2.3 BULK POMEGRANATE EXPORTED TO DUBAI FOR PROCESSING

Dubai disposes of a big plant for processing (10MT/h) reportedly working with chronicle under capacity.

Iraq could provide the needed raw material for processing concentrate juice.

SWOT ANALYSIS – BULK EXPORTS TO DUBAI FOR JUICE PROCESSING

Strengths	Opportunities
<ul style="list-style-type: none"> • Potential competitiveness of Iraqi raw material • No necessity of high quality varieties and sophisticated post-harvest technique • Lack of competition (Iran processes domestically, India higher transportation costs) 	<ul style="list-style-type: none"> • Potentially feasible in the short term • Potentially high volumes • Exploit back haul transportation
Weaknesses	Risks
<ul style="list-style-type: none"> • Low margin business 	<ul style="list-style-type: none"> • High transportation costs

2.4 MOBILE PROCESSOR FOR FRESH JUICE

Inma program is investigating with Qarafruit the potential for a “mobile” fruit processor to make fresh juice in aseptic bags of 5 Liters (no cold storage is required). The mobile processor, on the other hand will reduce or eliminate the current wastages in pomegranate and other fruit estimated in 25-30% of the production. The machine is “mobile”, that means juice can be produced in any location. The machine processes an average of 6.000-7.000tons/day in a shift of eight hours. The machine pasteurizes the juice and fills it in aseptic 5 liters bag with shelf life of two years. The cost of aseptic packaging is \$0.20/kg.

Profitability for the mobile juice processor was calculated mainly targeting apples or pomegranate for a quantity of 500 tons (50% pomegranate, 50% apples) and for months of production (1 shift eight hours/day). In the case of pomegranate juice yield is on average 43%, in the case of apples is 65%. Low grade pomegranate can be bought for a price at around ID400/kg or less (\$0.33), apples for ID300/kg (\$0.25). On average 2.3kg of pomegranate and 1.5kg of apples are required to make 1liter of juice. Direct processing cost is around \$200/ton. Packaging in aseptic bags is \$0.20/liter.

Net revenue = \$1.53/liter for pomegranate juice - \$1.10/liter for apple juice

Amortization @10 years = \$23.000

Administration Costs = \$25.000/year

The Expected IRR@7 years is 41%.

	Mobile Processor	Raw Material		Net sales			
Investment	230,000	Pome.	0.759	Pome.	1.53		
Amortization @10	23,000	Apple	0.375	Apple	1.10		
Mobile Fruit Processor							
P&L							
Quantity Tons	500						
Net Revenue	1.3150	657,500	100.0%				
Raw Material	0.5670	283,500	43.1%				
Variable Processing Costs	0.2	100,000	15.2%				
Packaging	0.2	100,000	15.2%				
Gross Trading Margin	0.1346	174,000	26.5%				
Amortization & Depreciation	23,000	23,000	3.5%				
Administration Cost	25,000	25,000	3.8%				
Operational Profit		126,000	19.2%				
Financial Expenses		12,000	1.8%				
Net Pre-Tax Profit		114,000	17.3%				
Tons	500	500	500	500	500	500	
Years	1	2	3	4	5	6	7
Initial Capital Investment	230,000						
Working Capital	200,000						-50,000
Pre-Tax Profit	114,000	114,000	114,000	114,000	114,000	114,000	114,000
Amortization & Depreciation	23,000	23,000	23,000	23,000	23,000	23,000	23,000
EBITDA	149,000	149,000	137,000	137,000	137,000	137,000	137,000
Net Cash Flow	293,000	149,000	137,000	137,000	137,000	137,000	87,000
IRR 7 Years	41%						

3. Inma Pomegranate Strategy

Next Steps

ACTION PLAN

Action	Responsible	Status - Timing
Visit to Bertuzzi Food Processing S.R.L in Milano - Italy	F.Scotti	Completed
Feasibility Study and P&L for Plant of concentrate juice 60-65 °Brix	F. Scotti M.Ilyas	April 2008
Supply study in Iraq to determine production, Surplus, Prices at far gate, varieties by region	F. Scotti - M.Ilyas – F.Baktash	May- June – July 2008
Recruitment short term consultant expert in Pomegranate and Dubai market	H.Weeks – LB GHQ	May 2008
Market study in Dubai with key Buyers to determine buyers requirements and phytosanitary	F.Scotti – Jorge Alvarado	June – July - August 2008
Logistic Study to determine transportation Costs to Dubai (alternatives and rates)	F.Scotti –	June- July – August 2008
Possible development of private partnership in the venture	F.Scotti – Jorge Alvarado	August – September 2008
Trial shipment to Dubai (fresh sorted and graded fruits), bulk for processing	F.Scotti – M.Ilyas	September – October 2008
Training and dissemination of best practices in sorting grading and post-harvest accordingly to market specifications	F.Scotti – J.Jeans – M.ilyas	August – September – October – November 2008
First evaluation market test potential for fresh and bulk in Dubai	F.Scotti	November 2008
Second optimized shipments to Dubai	F. Scotti M.Ilyas	December- January - February 2008-09
Conference in Dubai with Iraqi pomegranate exporters and growers	F.Scotti	February – March 2009
Final evaluation	F.Scotti	March 2009
Preparation optimized campaign 2009-10 (sorting, grading, supply chain, packaging, transportation)	F.Scotti – J.Jeans	April – May – June 2009

CALENDAR

Actions	Apr	May	June	July	Aug	Sept	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	June
Visit to Bertuzzi Food Processing S.R.L in Milano - Italy	■														
Feasibility Study and P&L for Plant of concentrate juice 60-65 °Brix	■	■													
Supply study in Iraq to determine production, Surplus, Prices at far gate, varieties by region		■	■	■											
Recruitment short term consultant expert in Pomegranate and Dubai market		■													
Market study in Dubai with key Buyers to determine buyers requirements and phytosanitary			■	■	■										
Logistic Study to determine transportation Costs to Dubai (alternatives and rates)			■	■	■										
Possible development of private partnership in the venture					■	■									
Trial shipment to Dubai (fresh sorted and graded fruits), bulk for processing						■	■	■							
Training and dissemination of best practices in sorting grading and post-harvest accordingly to market specifications					■	■	■	■							
First evaluation market test potential for fresh and bulk in Dubai								■							
Second optimized shipments to Dubai									■	■	■				
Conference in Dubai with Iraqi pomegranate exporters and growers											■	■			
Final evaluation													■		
Preparation optimized campaign 2009-10 (sorting, grading, supply chain, packaging, transportation)														■	■