

**RAMP**  
**Rebuilding Agriculture Markets in**  
**Afghanistan Program**

**Preliminary Feasibility Assessment for  
Exporting Produce from Afghanistan to  
United Arab Emirates**

**Submitted by**  
**Chemonics International, Inc.**

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## **Objective and Summary**

The objective of this report is to assess the potential of establishing reliable market contacts between Afghan produce exporters and possible buyers in Dubai and other cities in United Arab Emirates (UAE).

It became apparent to the Rebuilding Agriculture Markets in Afghanistan Program's (RAMP) management that the country was importing by air a number of goods from UAE, yet sending the same planes back with empty cargo hulls. With the potential existence of inexpensive freight costs to UAE, RAMP saw it prudent to explore the possibility of initiating a produce export program.

This report preliminarily assesses the feasibility of exporting fresh fruit (specifically, apples, apricots, grapes, peaches, plums, and pomegranates) from Afghanistan to UAE. The information gathered within this report was predominantly compiled by (1) expatriate consultant, Jeremy Foster supported by the technical expertise of RAMP staff members and (2) an Afghan produce trader, Mr. Khan Hazrat of Zamarai Rosi Ltd. While in Afghanistan, Mr. Eisa Nang and other members of the RAMP Translation Unit provided invaluable support in conducting this assessment.

The report addresses the current state of fruit exports in Afghanistan; existing UAE regulations regarding the importation of produce; the interest level of local traders in UAE of Afghan fruit (and to a lesser extent, Afghan nuts); and logistics associated with implementing a produce export program in Afghanistan. Although this report does not aims to provide a definitive strategy for implementing a fruit export program, it does illustrate specific issues that should be addressed before significant resources are dedicated by RAMP to such a program.

This paper concludes that although it is economically imperative for Afghanistan to enhance its export potential, the country does not demonstrate a competitive advantage warranting penetration into UAE's fruit market this growing cycle. These recommendations, extrapolated in greater detail in conclusion of this report, indicate areas RAMP should address before supporting fruit exports to UAE:

1. Work with the Ministry of Agriculture to establish a phyto-sanitary certification system.
2. Direct more resources to enhancing the quality of Afghanistan produce to a competitive quality, focusing on agriculture technology transfer, sorting/grading practices, and packaging facilities.
3. Enhance packaging and processing facilities in Afghanistan.
4. Develop a baseline study for conducting similar studies in other markets.
5. Focus more on exporting nuts to UAE.
6. Revisit the idea of establishing cold storage facilities at the airport.
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**I. Introduction**

## **Background Information**

The years of conflict have damaged but not destroyed Afghanistan's fruit production and export capacity. Throughout the war, dried and fresh produce from the main growing areas of eastern and southwestern Afghanistan continued to flow into markets in Pakistan and India. Similar produce flows existed between Mazar-e-Sharif to its northern neighbors and between Herat and its western neighbors. Many Afghan fruit growers spent years in Pakistan and Iran working as farm labors where they learned improved production techniques. Other Afghans were employed in the produce business in Pakistan in various capacities and have thus established trusting relationships with buyers and sellers throughout the region. Afghan traders and farmers have learned many skills that assist them in fruit production, and many have worked with traders that packed and shipped fresh fruit to the Indian Ocean and Persian Gulf region. The challenge is to tap into this expertise to recapture lost higher value markets.

The immediate interest is to expand out of the traditional markets in order to better develop Afghanistan's under-achieving fresh fruit industry. The availability of low cost air freight from Kabul to UAE coupled with growing interests among Afghans in the fruit business to explore these markets provides a good opportunity to encourage the exportation of fresh fruits on a larger scale.<sup>1</sup>

A recent analysis conducted by Agriculture Economist, Dr. John W. Mellor, emphasized the importance of RAMP focusing resources on the enhancement of fruit and nut trees in Afghanistan.<sup>2</sup> There is clearly much room for improving the quality of Afghan produce through the transferring of agriculture technology and enhancing processing/sorting/grading/packaging facilities. However, some international organizations and Afghan companies have already begun experimenting with the exporting of produce. The most notable recent examples are from Central Asia Development Group and Naseeb Group of Companies.

### **Central Asia Development Group (CADG): Pomegranates**

Central Asia Development Group (CADG) is a registered for profit company in the State of Maryland and a fully registered International NGO with the Ministry of Planning in Afghanistan<sup>3</sup>. The organization focuses on agriculture and engineering operations in Southern Afghanistan, and has experience exporting raisins, cotton, almonds, cumin, apricots, and pomegranates from Afghanistan to markets in United Kingdom, Germany, Czech Republic, Singapore, Indonesia, China and Thailand.

<sup>1</sup> Extracted from the assessment team's original scope of work, drafted by RAMP's Deputy Chief of Party for Infrastructure, Raymond Baum. 2004.

<sup>2</sup> Mellor, John. Presentation: "Strategic Priorities for Afghanistan's Agriculture - The Key to Rapid Employment Growth and Poverty Reduction". May 11 2004.

<sup>3</sup> CADG website: <http://www.central-asia.net/>

During August and September 2003, CADG implemented a pilot program exporting approximately eight metric tons of pomegranates from Kandahar to Singapore (via Quetta and Karachi, Pakistan, and then via Hong Kong, Thailand or Malaysia to the final destination). CADG worked with their importer in Singapore to issue Customs Declarations, in which the origin of the product was stated, and Singapore authorities conducted a subsequent routine health examination of the product before allowing it on the market. It is CADG's impression that Singapore is truly a free market, so as long as the correct documents are in order, the authorities generally allow entry, reserving the right to conduct random inspections. From the organization's experience, this procedure is the same regardless the size of the shipment.<sup>4</sup> Recently, CADG has expanded its program and has developed an international marketing plan for exporting pomegranates from Afghanistan to markets throughout South East Asia.

The following key findings of CADG's pilot program are documented in the correlating report<sup>5</sup> and should be considered for future produce export initiatives:

- The value of pomegranates increases greatly through value-added processing procedures.
- Most sophisticated international wholesale markets require standardized size and weight for all pomegranates shipped in a single carton. Pomegranates must be properly sorted and graded in Afghanistan before export.
- Securing trade agreements with grocery retailers, and setting up small sampling booths in stores, proved to be a very cost effective and complimentary distribution and marketing mechanism.
- Spanish pomegranates are the dominant competitor to Afghan pomegranates in Singapore and Thailand. Although smaller, Spanish pomegranates are firmer, sweeter, more uniform in size and quality, and less expensive.
- Shipping pomegranates in 24 piece cardboard boxes (two layers of 12) with cardboard dividers proved to be ineffectual in transporting fruit, resulting in significant numbers of bruised and damaged fruit. Packaging in wooden boxes, packed with sawdust, similar to method for packaging Spanish pomegranates, will be explored for next shipment.
- High demand periods for pomegranates in Singapore are around the Indian holiday Deepavali (Late October – Early November) and around Christmas (Late December).
- At the time of the study, air freight was prohibitively expensive, resulting in a very complex trade route through Pakistan and an additional South East Asian country (Hong Kong, Thailand or Malaysia). As transportation facilities are constantly improving in Afghanistan, trade routes for future export programs may be simplified.
- Future activities related to exporting pomegranates will focus on:
  - (1) Increased technical assistance to farmers and graders,
  - (2) Improved packaging,

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<sup>4</sup> Shaulis, Steve. E-mail from CADG. May 17, 2004

<sup>5</sup> CADG. "Afghanistan Pomegranates". 2004.

(3) Market development.

### **Naseeb Group of Companies: Apricots**

Naseeb Group of Companies (Naseeb) is a manufacturing, exporting and importing conglomerate currently operating offices in Toronto, Jeddah, Dubai, Kabul, Tashkent, Volgograd, and Mazar-I-Sharif. Naseeb runs a large assortment of processing facilities and has corporate ambitions to expand in all areas of food service and export throughout Afghanistan. 2004 will be the second consecutive growing season that Naseeb has exported Amiri apricots to Dubai. This season the company plans to export 20 metric tons to Dubai. Although Amiri apricots are regionally known for their quality and Naseeb already has buyers guaranteed, the 2004 shipment is relatively small in comparison to the enormous volume of apricots Dubai is currently importing from neighboring countries in the Middle East.

Issues that Naseeb is facing that should be considered in planning any future produce export program include:

- The company's export marketing plan is primarily based on expanding to those international markets where they could get the least expensive cargo rates. The company is shipping to Dubai on Ariana Afghan Airlines at 35 cents / kg.
- If the market is receptive this season, Naseeb plans to export grapes to Dubai later in the summer.
- Naseeb could not find box manufacturers of an acceptable quality in Afghanistan. All of the packaging is manufactured in Pakistan, and imported to Afghanistan.
- Naseeb purchases all fruit at the wholesale market in Kabul. At the market, women are employed throughout the night to sort and pack the fruit.
- Naseeb reported that only two documents were needed to import their product to Dubai, Certificate of Origin and Phyto-sanitary Certificate. The manager maintained that both of these documents are available at the customs house, and that his "people" take care of it. (Note: This statement from Naseeb is particularly dubious, as currently there is no phyto-sanitary certification system currently in Afghanistan)

### **Tasks**

In order to conduct this assessment, RAMP management saw it necessary to team an Afghan importer/exporter with an expatriate consultant to assure (1) appropriate contacts were made and market information was gathered through local knowledge and that (2) reporting was submitted in manner that would be acceptable to Chemonics and USAID. This two-person assessment team was assigned to complete the following tasks as outlined in their scope of work:

- 1) Conduct baseline legal and procedural research pertaining to requirements necessary to air-freight fresh produce from Kabul to UAE, focusing on:
  - UAE Food, especially fresh fruit, imports laws.
  - Availability and access procedures for refrigerated storage at the terminal produce markets in UAE.

- UAE's legal requirements for produce sanitation and packaging and industry requirements for palletized packaging.
  - Point of sale commercial packaging preferences for fresh produce in UAE.
  - Flight schedules, freight capacities, and refrigerated freight costs associated with shipping fresh produce from Kabul to Dubai, Abu Dhabi, and Sharjah.
- 2) Assess the current logistical and legal mechanisms now extant in Kabul as they relate to cold storage and export of fresh produce including but not limited to:
- Description of the current cold storage capacity in Kabul available and appropriate for handling moderate amounts of air freighted produce.
  - Determine the most appropriate alternative for the provision of cold storage units, within the airport compound or adjacent facilities.
  - Gather data on flight frequencies, freight capacities, and air freight costs from Kabul to Dubai.
- 3) Travel to UAE and initiate formal contacts with produce businessmen to:
- Determine which traders would be interested in buying from or selling on behalf of a consortium of Afghan fruit exporters, gathering as much information as possible about their trade volume and specialties.
  - Identify traders' needs and interests in terms of types, quantities and qualities of produce they would buy from Afghan exporters.
  - Determine the norms for quality evaluation of produce by the customers.
  - Define and record pertinent information for palletized shipping requirements.
  - Procure physical samples of packaging that represent the standard required by customers for the range of products proposed to ship from Afghanistan: apples, apricots, grapes, peaches, plums and pomegranates.
  - Define the whole range of currently existing options on terms of purchase; cash, credit, consignment, commission, etc. and what quantities would be acceptable under which terms of sale.
  - Define UAE fresh fruit import, source countries, type of fruits and corresponding months of their import.

## **Selecting a Partner**

Given the company's recent experience with exporting produce from Afghanistan and its existing working relationship with RAMP, the assessment team initially contacted CADG in January 2004 to participate as a partnering organization in this feasibility assessment. CADG demonstrated an understanding of the importance of complying with international quality and sanitary standards, and had previously established contacts within the UAE produce industry.

Initially, CADG did express a strong interest in contributing to this assessment. Yet, in early April 2004 the organization, for undisclosed reasons, claimed it was not in position to contribute to this program at this time. Consequently, with fairly short notice before the growing season, the expatriate consultant was obligated to contact other traders to gauge their willingness and capacity to assist in this assessment. Following are descriptions of three companies operating in Kabul that the assessment team believed to have the appropriate credentials and resources to contribute to this assessment. Ultimately, RAMP arranged a service agreement with Zamarai Rosi Ltd. to contribute to this assessment.

### **Supreme Foodservice Sales, Inc.**

Supreme Foodservice Sales (Supreme) operates as a PX for all international military and aid staff working in Kabul. The Deputy Chief of Party, Infrastructure submitted the initial scope of work, from CADG's proposal, to Supreme's PX Manager Barbara Dodge for review early April, 2004. Dodge maintained the scope of work needed to be reviewed by Supreme's head office in Germany. After repeated follow-ups with Dodge during April and May 2004, RAMP was informed that she had not heard back from the home office and she declined to give contact information of the scope of work's reviewers in Germany. Due to the fact that Supreme's main contact in Kabul, Barbara Dodge, was not authorized to make decisions on behalf of the company for its proposed involvement in this study, the assessment team determined that the company was not a suitable partner.

### **Chelsea Super Market**

Chelsea Super Market (Chelsea) is a medium-sized import company based in Kabul, selling an extensive product line, ranging from international brand-name consumables to office supplies to house-hold appliances to motorcycles. Although Chelsea does have some limited experience exporting dried fruit (raisins) to England and Russia, the company has never been involved in fresh produce exporting. Upon initial conversations, the proprietors of Chelsea were very interested in contributing to this program. However, after further discussions, the assessment team became aware that Chelsea may be interested in participating in an export program as a retail or wholesale entity, but had no interest, time, or experience to contribute to market research or feasibility studies.

The company's partners were in possession of the scope of work for this assignment translated into Dari for over a week, but never generated a quote for their services nor contacted the team with questions to clarify the assignment. Eventually, the assessment team delivered a letter to Chelsea, indicating that due to the company's failure to respond, RAMP would move along with the assessment without Chelsea's participation. Since receiving the letter, Chelsea representatives have not contacted the assessment team.

### **Zamarai Rosi Ltd.**

Zamarai Rosi Ltd. is a small fresh produce, dried fruit and nut trading company that has been in operation in Kabul for over 25 years, working with markets in Iran, Pakistan, Uzbekistan and UAE. The company is currently in the process of constructing a nut and dried fruit processing facility, and is in partnership with packaging manufacturers, specializing in the custom construction of cardboard box to any specification. Given the

company's past experience in produce exporting, existing contacts with farmers in Afghanistan and produce traders in UAE, access to (once construction and machinery procurement is complete) processing and packaging facilities, and a genuine interest in RAMP' export initiatives, Zamarai Rosi proved to be the most suitable partner for this feasibility assessment. RAMP's Deputy Chief of Party for Agriculture and Senior Agriculture Advisor were confident after discussing the assignment with the company's president, that Zamarai Rosi had illustrated operational knowledge that would be beneficial to this assessment.

## **II. Procedures for Exporting Produce to UAE**

The assessment team was instructed by RAMP to conduct baseline legal and procedural research pertaining to requirements necessary to air-freight fresh produce from Kabul to UAE. The following information is from Shar Jah International Airport's website<sup>6</sup>, and has been verified by officer's of the Cargo Village at Duabai International Airport, and traders at Dubai's Hamriyah Wholesale Market.

### **Accompanying Documentation**

The following documents must be accompanied with every shipment of foodstuff arrives to the Port Khaled, Khorfakkan, Sharjah International Airport, or Dubai International Airport.

- Bill of entry or airway bill.
- Packing list
- Health certificate of the consignment issued by government or local authority of the original countries (Phytosanitary Certificate)
- Halal certificate (for meat/poultry), issued by Islamic organization recognized by the government of UAE. (\*)
- Certificate of origin

### **Labeling**

All food items that arrive through UAE's ports of entry must be clearly labeled in accordance with the following specifications:

- Labeling on each item must be as follows:
  - (1) Difficult to remove or alter
  - (2) Clear and easy to read
  - (3) The label must show and specify source of fat, enzyme, gelatin, rennet and or any animal products contain.
- Labeling must not be as follows:
  - (1) False, misleading or deceiving

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<sup>6</sup> <http://www.shj-airport.gov.ae/foodimportreq.htm>

- (2) Indicate that it is another foodstuff
- (3) With covered, altered or obliterated data
- (4) Easy to remove from the container
- Information on the Labels must contain the following:
  - (1) The exporting company's brand name
  - (2) The name of the foodstuff
  - (3) The ingredients
  - (4) The country of origin
  - (5) Production and expiry dates:  
(dd/mm/yy (less than six months) OR mm/yy (more than six months))
  - (6) Name and address of the manufacturer
  - (7) The names of E No. added to the product (if any)
  - (8) The condition of storage (if applicable)
  - (9) The method for preparation for consumption (if applicable)
  - (10) The net contents (weight or volume)

## **Methods for Dating**

- In all cases, dates on stickers are not allowed:
- All food items must show production and expiry dates.
- The hand-written dates are not accepted.
- Dates must not be easily erased.
- Dates must be written as: dd/mm/yy for products less than six months shelf life, for more than six months shelf life could be written as mm/yy.
- Dates must be printed, imposed or ink jetted.
- Double dated are not permitted dates can not be changed or added once it arrived to the ports.
- Dates must be in Arabic or in English or both if possible.

Any of the following terms may be used to express the date of expiry but with the necessity to mention the date of production.

- Date of expiry
- Good for use until .....
- Valid for ..... from the date of production
- Use before .....
- Sold up to .....
- In case the production date and expiry date are written in month and year only, the validity period shall be calculated up to the end of the expiry month.
- The date mentioned on the items must be the same on the master cartons.

## **Rejection of Consignment**

An international exporter can avoid rejection of consignment by:

- Providing the correct shelf life on the product according to the local regulation.
- Labeling according to the local regulation.
- Not including any un-permitted additives or preservatives.

- Being aware of the biological, microbiological, and chemical standards for the relevant foodstuffs.
- Labeling information in Arabic or English or both.
- Including production and expiry dates as embossed on the container, or ink jetted.
- Being aware that food consignment will be rejected, if 50% of the shelf life elapsed.

## **Action for Rejected Food**

- When consignment of foodstuff is rejected due to unfitness for human consumption because of microbial contamination, consignment must be re-exported to the country of origin or to be destroyed under the supervision of Public Health Section of the regulating municipality.
- When a consignment of foodstuff is rejected due to label regulation, or for physical condition, shelf life etc., the consignment must be re-exported to the country of origin, or to a third party country (which is not a GCC country), or to be destroyed by Public Health Section of the regulating municipality.

## **Inspection and Clearance Procedure**

All consignments arriving through ports of entry are subject to physical inspection. Certain foodstuffs such as baby food, edible oils, dairy and dairy products are subject to laboratory analysis.

- After sampling, the consignment will not be released for marketing till the result of analysis of the consignment declared. For those consignees having warehouse at the port of entry, the consignment could be released temporarily to their warehouse and detain till the result declared. Consignment for other Emirates, consignee is requested to consult the Public Health office for the procedure of release. The result of the analysis and subsequent decision as to their fitness normally takes 3-4 working days.
- If the consignment is only examined physically (provided that the documentation is correct, the labeling and dating complies with the legislation and foodstuff is physically sound) the consignment will be released.
- The procedure from the presentation of the consignment at the inspection dock to release will not take more than one hour subject to the number of items in a consignment and their availability for inspection.

## **Information Required Before Importing Foodstuff**

- Refer to Public Health Section of the regulating municipality when deciding to import foodstuff for the first time.
- Submit samples to food laboratory of regulating municipality to ensure compliance to the specifications, label regulation, shelf life and etc.

## **Types and prices of import certificates**

- Destruction Certificate - Fees: Depends on the value of the goods
- Export Certificate - Fees: 100/-Dhs. (US\$27.32)
- Rejection Certificate - Fees: 100/- Dhs. (US\$27.32)

- Radiation Certificate - Fees: will be decided
- Certificate of analysis - Fees: will be decided
- De-rating Certificate - Fees: 200/- Dhs. (US\$54.64)

### **III. Fruit Market in UAE**

Dubai's Hamriyah Wholesale Market is open 24 hours a day, albeit in various stages of operation. Most activity at the market occurs between 4:30am to 11:30 am and 4:30 pm to 10:00 pm. The market is loosely divided into a vegetable section and a fruit section, with stalls facing the streets and offices occupying the second floors of buildings behind them. In July 2004, Hamriyah will close and an even larger more sophisticated US\$41.8 million Central Fruit and Vegetable Market will open.

Sharjah also has a wholesale market but it is much smaller than

In the service agreement with Zamarai Rosi Ltd. the scope of work outlines that the company's representative was to arrange meetings with UAE produce traders who expressed interest in buying Afghan produce. Upon arriving in UAE, the assessment team had no appointments pre-arranged, but merely a handful of business cards of traders who had not yet been contacted with regards to this assessment. The first day at the market was spent walking into offices unannounced to arrange meetings for a later date.

The assessment team did have a chance to talk with a collection of smaller wholesale traders who operated exclusively from stalls and had no formal offices at the market. From these individuals, the team was able to gather valuable information with regards to the appropriate packaging for shipping produce, the originating countries of produce, possible market windows for Afghan produce, and wholesale market values. This information is incorporated throughout the body of this report.

While in Dubai, the team met with a total of 7 large wholesale fruit traders, trading in approximate volumes of 25 -35 metric tons / day. These companies sell to 4-5 star hotels in Dubai, rent shelves and sections in UAE grocery stores and union co-ops, and re-export some products to other countries in the region. More than half of the traders approached were not interested in discussing the prospect of importing fruit from Afghanistan. Three companies (NRTC, Khalid Ahmed Faudah Group, Goldfruit International) were receptive to the team's approach and would like assess the quality of Afghan products firsthand before offering their professional opinion of the fruits' marketability in UAE. All receptive traders stressed the importance of paying close attention to transport costs, only exporting high-quality products, and when initially testing the exports, start with a small volume encased in small packaging. Other issues raised by the prospective importers that should be held in consideration for export programs are:

- It would be more competitive to arrange 20 – 15 cents/ kg for air freight rather than the 35 / kg currently offered by Ariana Afghan Airlines
- Most produce sold in the Dubai market is of a high quality and is delivered by road from neighboring countries.
- During the summer, all stone fruit comes from Middle Eastern countries, who have completely dominated the market with a quality product.
- A concern was expressed that the sorting of fruit in Afghanistan is manual and not by machine, so it won't be as exact as fruit coming from other countries.
- Most produce comes from boats and trucks in refrigerated containers

The wholesale traders were reluctant to discuss prices without seeing samples of the Afghan produce. Most traders were disbelieving that Afghanistan was producing any agriculture products at this time, and even less convinced that Afghan produce would be of quality acceptable in Dubai's market. However, the traders were happy to discuss payment structures they are comfortable operating under when going into business with a new vendor:

- Traders usually pay 30 – 45 days after receiving products. Payment schedule depends on amount and volume.
- Small volume can usually make payment after one week if they are the sole distributor and if the product is good.
- Reluctant to establish contracts with new vendors and never pays up-front. Prefer to work with new vendors on a commission basis.
- Will offer commission plan for high quality product at a reasonable price. Rates are between 8 – 10 % depending on the relationship with vendor and trade volume.
- Although unlikely, if the product moves quickly, payment can be made to the vendor in one day.
- If proper banking facilities exist, payment can be made through direct transfer.

## **Interested Fruit Traders**

The following traders expressed interest in learning more about Afghanistan's agriculture sector and would like to assess produce samples. All have been receptive to follow-up correspondences sent subsequent to the initial meeting, and willing to provide through e-mail additional information about their trading operations and payment structures.

### **Nasser (NRTC)**

Mohammed Al Rifai, Managing Director  
 P.O. Box: 21802, Dubai UAE  
 Tel: 04-272-6462  
 Fax: 04-272-8352  
 Mobile: 050-450-0775, 050-724-2321  
 Email: nassar@emirates.net.ae

**Khalid Ahmed Faudah Group of Co.**

Hani Ayloush, Import and Business Development Manager  
P.O. Box: 5173, Dubai UAE  
Tel: 971-4-271-3818  
Fax: 971-4-271-9585  
Mobile: 971-50-755-8757  
Email: kafgroup@meirates.net.ae

**Goldfruit International**

Haji K. Kunhu  
P.O. Box: 6349, Dubai UAE  
Tel: 971-4-272-6875  
Fax: 971-4-272-6920  
Mobile: 971-50-642-7204  
Email: goldfrut@emirates.net.ae

**Afghan Fruit in UAE**

For this preliminary assessment, the team focused primarily on those fruit that were outlined in their scopes of work: apple, apricot, cherries, peaches, plums, and pomegranates. While in UAE, the team investigated these fruit with regards to their wholesale and retail value in Dubai, their current countries of origin, the appropriate packaging for shipping each type of fruit, and the time of year when the fruit would get the best price in Dubai. The general consensus was that the UAE fruit market is very hard to break into, primarily because the fruit markets are already trading all produce that Afghanistan produces, at a quality in which Afghan farmers are not yet producing.

The table on the following page lists those aforementioned commodities, where UAE is currently importing them from, their wholesale price in Dubai, months when their prices are the highest, and the months the commodity is grown in Afghanistan.

**Table 1. Fruit produced in Afghanistan that is currently available in UAE from other countries.**

Commodity	Countries of Origin	Wholesale Price \$US / Kg*	Months when price is the highest**	Months grown in Afghanistan***
<b>Apple</b>	China, USA, Iran	\$1.43	October	April - September
<b>Apricot</b>	Tunisia, Syria, Iran, Turkey	\$1.64	December – February (progressively better each week after August)	April - July
<b>Cherries</b>	Saudi Arabia, Lebanon, Iran	\$1.64	Any month after August	April - June
<b>Grapes</b>	India, Iran, Syria, Lebanon	\$2.60	January - February	April - October
<b>Peach</b>	Saudi Arabia, Egypt, Syria, Iran, Turkey	\$.82	December – February (progressively better each week after August)	April - July
<b>Plum</b>	Summer: Lebanon, Syria, Jordan Winter: Australia, South Africa	\$1.91	December – February (progressively better each week after August)	April - July
<b>Pomegranate</b>	India, Spain, Iran, Tunisia.	\$3.50	July – October	April – October

\* Wholesale prices are an average of prices quoted by wholesale traders between May 8 and May 12 at Dubai's Hamriyah Wholesale Market. Prices were quoted in UAE Dirhams and converted to US Dollars (1US\$ = 3.66 dh)

\*\* Information is based off discussions with wholesale and retail traders in Dubai.

\*\*\* Information related to months the commodities are grown in Afghanistan is from RAMP Production and Marketing Manager, Dr. Mohammad Alem Alemi.

## Cost of Production vs. Wholesale Price

RAMP's Monitoring and Evaluation Unit has taken great strides in collecting data as it relates to the cost of producing various commodities in Afghanistan. Dr. Teshome Lemma, a Monitoring and Evaluation Specialist working with the program, has analyzed production costs for apples, apricots, cherries, grapes, plums and pomegranates. The production costs for this study include:

1. Labor and Farm Power (Pruning, Manure transport, Fertilizer application, Manure application, Plant protection application, Irrigation)
2. Agricultural Inputs (DAP, Urea, Manure, Pesticide)
3. Harvesting (Picking labor, Sorting and packing labor)
4. Marketing (Boxes, Transport to local market, Loading and unloading labor)
5. Fixed Costs (Farm tools, Spray pump, Land rent)

As Dr. Lemma outlines in his study, fruit trees producing these commodities are not productive until they are at least 5 years old; some fruit trees are not productive until their ninth year. At different stages of their growth, fruit trees vary in the amount of inputs they require (fertilizer, focused irrigation etc.) and vary in their respective yields. For example, at the end of their life, the trees may not be producing as much fruit as they did in previous years, but they require fewer inputs; consequently the cost of production is not severely altered.

The following table illustrates the costs associated with producing one kilogram of the aforementioned fruit at various stages of tree growth. The last column of the table expresses a weighted average cost for producing each commodity, in consideration of the varying production costs for the fruit at the different growth stages.

**Table 2. Cost of production in US\$ for Afghan fruit**

Commodity	Production Cost \$US / Kg*	Production Cost \$US / Kg*	Production Cost \$US / Kg*	Weighted Average Production Cost \$US / Kg
	<b>Yr 7-11</b>	<b>Yr 12-22</b>	---	<b>16 years</b>
<b>Apple</b>	\$0.13	\$0.10	---	\$0.11
	<b>Yr 7-12</b>	<b>Yr 13-16</b>	<b>Yr 17-25</b>	<b>19 years</b>
<b>Apricot</b>	\$0.10	\$0.08	\$0.07	\$0.08
	<b>Yr 9-13</b>	<b>Yr 14-18</b>	<b>Yr 19-25</b>	<b>17 years</b>
<b>Cherries</b>	\$0.20	\$0.15	\$0.12	\$0.15
	<b>Yr 5-8</b>	<b>Yr 9-15</b>	<b>Yr 16-20</b>	<b>16 years</b>
<b>Grapes</b>	\$0.28	\$0.17	\$0.17	\$0.19
	<b>Yr 9-15</b>	<b>Yr 16-23</b>	---	<b>15 years</b>
<b>Plum</b>	\$0.20	\$0.15	---	\$0.17
	<b>Yr 5-10</b>	<b>Yr 11 – 16</b>	<b>Yr 17-20</b>	<b>16 years</b>
<b>Pomegranate</b>	\$0.16	\$0.11	\$0.12	\$0.13

\*All data is provided by RAMP Monitoring and Evaluation Specialist, Dr. Teshome Lemma who collected information from RAMP Agriculturists and Project Manager.

The following table draws the production costs for each listed fruit from Dr. Lemma's data and compares it to the wholesale fruit prices offered for those fruit in Dubai, resulting in a cost / price ratio.

The profit margins for each commodity are explored in a greater detail later in the report. However the margins below provide some insight as to those commodities which would be most competitive in the UAE market in relation to each other.

**Table 3      Wholesale Price in \$US / Production Cost of Afghan Fruit**

Commodity	Weighted Average Production Cost \$US / Kg*	Wholesale Price \$US / Kg**	Wholesale Price \$US / Production Cost Ratio
<b>Apple</b>	\$0.11	\$1.43	13
<b>Apricot</b>	\$0.08	\$1.64	20.05
<b>Cherries</b>	\$0.15	\$1.64	10.93
<b>Grapes</b>	\$0.19	\$1.91	10.05
<b>Plum</b>	\$0.17	\$1.91	11.23
<b>Pomegranate</b>	\$0.13	\$1.90	14.61

\*All data is provided by RAMP Monitoring and Evaluation Specialist, Dr. Teshome Lemma who collected information from RAMP Agriculturists and Project Manager.

\*\*Wholesale prices are an average of prices quoted by wholesale traders between May 8 and May 12 at Dubai's Hamriyah Wholesale Market. Prices were quoted in UAE Dirhams and converted to US Dollars (1US\$ = 3.66 dh)

An initial analysis of the price / cost ratios, indicates that apricots, and to a lesser extent pomegranates and apples, are the commodities which demonstrate the greatest economic potential for export to UAE. However, it is important to note that this data does not take into consideration the relative perishability of the individual commodities, or the costs associated with international transportation. Additionally, this data assumes that the produce of Afghanistan is of an equal quality to the produce that is currently available at UAE produce markets; a claim which has not yet been validated.

#### **IV. Nut Market in UAE**

Although the assignment's scope of work did not include a focus on nuts or dried fruit, the assessment team did have the opportunity while in Dubai to briefly investigate the potential for exporting a range of these commodities to UAE. To the team's advantage, Khan Hazrat from Zamarai Rosi had brought with him several bags of samples of nuts and dried fruit to UAE. (Due to the perishability of fruit and the unavailability of certain commodities, it was impracticable for the team to bring fresh fruit samples to UAE for fruit traders to assess).

The team met with a total of four wholesale nut and dried fruit traders and one retail nut and dried fruit trader in Dubai. Similar to the fresh fruit sector, most of the wholesale traders were surprised to hear that Afghanistan was producing and processing nuts and dried fruit suitable for export. The one retail trader, KNP Foodstuff, currently sold

Afghan raisins, dried figs, pine nuts and pistachios. However all of the retailers Afghan goods were imported to the UAE through India.

All of the nut traders who tested the Afghan samples said they were of an acceptable quality for the UAE market, but they had some doubts about the sophistication of the Afghan sorting and grading practices.

The traders informed the assessment team that nuts and dried fruit to fetch the highest price in UAE just before and during Ramadan (beginning October 15, 2004). During this period of fasting there is much demand for nuts for their high protein content. Additionally, many residents of UAE prepare meals for charity during Ramadan, which often include nuts and dried fruit in their recipes.

The traders emphasized that there is no market for a mixed nut and dried fruit combination at the wholesale level. Such combinations, similar to 'trail mix', are sold at the retail level in UAE. However, they are packaged by grocery stores and processors in UAE, who purchase the individual commodities separately at the wholesale level, and mix them according consumer tastes to which they are familiar with.

The following table outlines the wholesale price for various nut and dried fruit commodities that are produced in Afghanistan.

**Table 4. Wholesale UAE Prices in \$US for Nuts, Dried Fruit, and Spices Produced in Afghanistan.**

Commodity	Wholesale Price in Dubai / Kg*
Dried Fig	X Will have price soon
Pine Nuts, kernel	12.02
Pine Nuts, in shell and sun-dried	9.29
Walnut in shell	X Will have price soon
Walnut, whole kernel (no black, only amber)	X Will have price soon
Walnut, half kernel	X Will have price soon
Walnut, broken	X Will have price soon
Black Raisin, without stem	.81
Long Green Raisin, without stem	2.04
Round Green Raisin, without stem	1.61
King Cumin (Grade 1, 2, 3, 4)	8.20
Red Melon Seed (Grade 1, 2, 3, 4)	1.02
Pistachio in shell	4.51
Pistachio, whole kernel	6.83
Pistachio, half kernel	4.10
Sesame	.18
Almond	X Will have price soon

\* Wholesale prices are an average of prices quoted by wholesale traders between May 8 and May 12. Prices were quoted in UAE Dirhams and converted to US Dollars (1US\$ = 3.66 dh)

## V. Logistics associated with export

### Phyto-Sanitary Certification

A phyto-sanitary certificate is a document issued by most countries' Ministry (Department) of Agriculture, or comparable government body, which verifies the quality of a produce shipment, and which many countries require for the import of unprocessed plant products<sup>7</sup>. Currently, there are no phyto-sanitary regulations in place in Afghanistan, and therefore no mechanism exists to guarantee the quality of produce for export.<sup>8</sup>

There are a select number of global organizations which verify national phyto-sanitary certification systems. In 1963, FAO and the World Health Organization created the Codex Alimentarius Commission to develop international standards and guidelines for food traded on the global market. The commission aims to protect the health of consumers, ensure fair trade practices in the food trade, and promote coordination of all food standards work undertaken by international governmental and non-governmental organizations.

The Codex Alimentarius system presents a unique opportunity for all countries to join the international community in formulating and harmonizing food standards and ensuring their global implementation. It also allows them a role in the development of codes governing hygienic processing practices and recommendations relating to compliance with those standards.<sup>9</sup>

As CADG and Naseeb have already demonstrated, it is possible to export produce from Afghanistan to international markets without a national phyto-sanitary certification system in place. Clearly, some international markets present less strict barriers to trade with regards to phyto-sanitary regulations than others. For example, at this time, Afghanistan has no difficulty exporting produce across the border into Pakistan. Although some countries do not require such certification for importing produce, the implementation of such a system would greatly expand the number of international markets to which Afghanistan can export agriculture products.

### Refrigerated Storage Facilities in UAE

Both Dubai and Sharjah's international airports house extremely sophisticated cargo villages, which are suitable for storing fresh produce. Given that the cargo villages offer

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<sup>7</sup> South Dakota, USA Department of Agriculture. <http://www.state.sd.us/doa/das/PHYTO.html>

<sup>8</sup> Mahbooba Abawi. National Food Security and Nutrition Consultant with Food and Agriculture Organization (FAO) of the United Nations and Afghanistan Ministry of Agriculture and Animal Husbandry. Meeting, May 18, 2004.

<sup>9</sup> <http://www.codexalimentarius.net/>

free storage for the first 11 hours and then charge 2 cents / kg / day<sup>10</sup>, it is in the exporters' best interest to line up confirmed buyers in advance of shipping to avoid additional storage prices. There are no pallet requirements for importing to or storing shipments in these cargo villages.

Logistics associated with storing fresh produce in Dubai are directly related to the purchasing arrangement the vendor has with the buyer. If RAMP is only able to arrange consignment deals with produce buyers in Dubai, then vendors must consider additional storage costs when calculating the commodities' selling prices.

In 1995, The Department of Pomology at the University of California, Davis published a report on small scale post-harvest handling practices<sup>11</sup>. Following is a table with information gleaned from that report relating to the recommended storage temperature, relative perishability and potential storage life of fruit produced in Afghanistan. For this study, the "relative perishability" of a commodity is its propensity to bruise or spoil in relation to the other listed commodities. Although the report is nearly 10 years old, RAMP agriculturists have assured the assessment team that there is no reason for this data to have substantially changed.

**Table 5. Storage specifics for Afghan fruit**

Commodity	Recommended Storage Temperature (Fahrenheit)*	Relative Perishability*	Potential Storage Life (Weeks)*
<b>Apple</b>	30 - 40	Moderate	4- 8
<b>Apricot</b>	31-32	Very High	<2
<b>Cherries</b>	30 - 31	Very High	<2
<b>Grapes</b>	31 -32	With SO2 Treatment: High Without SO2 Treatment: Moderate	With SO2 Treatment: 2-4 Without SO2 Treatment: 4- 8
<b>Peaches</b>	31 - 32	High	2- 4
<b>Plums</b>	31 – 32	High	2- 4
<b>Pomegranates</b>	41	Moderate	4- 8

\* All data are from Kitinoja and Kader's "Small Scale Post-Harvest Handling Practices". 1995

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<sup>10</sup> Sharjah Airport Authority Information Book. 2004.

<sup>11</sup> Kitinoja, Lisa and Adel Kader. "Small Scale Post-Harvest Handling Practices" in POSTHARVEST HORTICULTURE SERIES NO. 8 - March, 1995.  
<http://www.fao.org/Wairdocs/X5403E/x5403e00.htm#Contents>

## **Refrigerated Storage Facilities in Afghanistan**

Currently there are no refrigerated storage facilities available in Afghanistan for local farmers/traders to store produce for export. According to a 2004 report from the Institute for War and Peace Reporting, the lack of cold storage and processing facilities throughout the country often prevents farmers from selling crops at cost recoverable prices. Accessible refrigerated storage facilities would prevent spoilage and allow farmers and traders to extend their window of opportunity beyond summer production months, allowing them to obtain higher prices for produce when supplies are low.<sup>12</sup>

These sentiments regarding the need for cold storage facilities have also been identified by RAMP staff through discussions with Afghan farmers and traders, and market studies. Although CADG and Naseeb have demonstrated that it is possible to export fresh produce on a small scale to international markets, in order to expand the operation, mitigating the risk for spoiled fruit, the installation of reliable refrigerated storage facilities are necessary. As outlined in the scope of work for this assignment, the assessment team explored the possibility and logistics associated with installing refrigerated storage facilities in Kabul. The key focus areas were identifying (1) a location and (2) a manufacturer for these facilities.

### **• Location**

For this assessment, three sites were explored as potential locations for housing refrigerated storage containers: TRYCO, Kabul International Airport, and Zamarai Rosi.

#### **TRYCO**

TRYCO is an industrial importer of petrol, vehicles, aircraft and heavy machinery. Currently the company provides the sole source of fuel for the UN motor pool and has contracts with ISAF and the US military, supplying them with helicopters, trucks, all terrain vehicles, and other assorted tools of mass security.

TRYCO is located in the cargo park towards the back of the airport, adjacent to Supreme. The company has a large compound, and is expanding its business at an astonishing rate. RAMP's Senior Agricultural Advisor and Agribusiness Advisor had previously discussed produce export intentions with TRYCO's president Frank Zenz. In previous discussions about the company's participation in an export program with RAMP, TRYCO offered airfreight rates to Dubai of 60 cents / kg for loads of 15 tons or above. At the time, this was regarded by the RAMP agribusiness advisor as a "very competitive rate"<sup>13</sup>.

TRYCO has demonstrated that although it is a very successful importer, the company has no experience in exporting produce. However, the assessment team was encouraged by RAMP staff to contact TRYCO to see if the company was interested in housing cold storage facilities for the RAMP through a leasing arrangement. TRYCO's representative

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<sup>12</sup> Basharat, Mustafa. "Farmers Try To Stop The Rot." Institute for War and Peace Reporting. March 3, 2004.

<sup>13</sup> West, Martin. Afghan Agribusiness Review.

presented three possible options for RAMP for to pursue. The options were assessed by the team and deemed unsuitable for the following reasons:

1) Storing containers on TRYCO's existing compound.

This option is not suitable because:

- The entire compound smells of fuel. There is no way to guarantee that these odors will not permeate encased produce.
- Although their compound is conveniently located next to the back door of the airport, currently TRYCO is not authorized to use this portal. All of TRYCO's fuel trucks now drive from the compound, through the city, and into the airport's main entrance. The total drive time could exceed 45 minutes. Fresh produce would not fare well sitting in Kabul traffic.

B) Storing containers at the airport.

TRYCO is currently within negotiations with the airport and Ministry of Civil Aviation and Tourism to lease a plot of land on the airport for storage. This may not be the best option because:

- As TRYCO is expanding in directions other than produce exporting, they may find a more lucrative or operationally savvy use for this land beyond leasing it to RAMP.
- Currently RAMP is in negotiations with the same Ministry of securing a plot of land on the land for storage containers, and there is no apparent reason to go through a middle man such as TRYCO.

C) Storing containers on yet to be purchased parcel of land 3 Km from the airport.

TRYCO is currently exploring the possibility of purchasing a large parcel of land on a road that is currently being renovated which goes straight to the airport. TRYCO plans to build a new compound on this site, and is willing to lease space out to RAMP. This option will not be available until September and therefore does not address RAMP's needs at this time.

### **Kabul International Airport**

Through the Deputy Minister of Agriculture, Mr. Sharif, the assessment team was able to secure a meeting with the Technical Deputy Minister, Eng. Raz Mohammad Alami to discuss the possibility of storing refrigerated containers at the Kabul International Airport. Mr. Alami was interested in RAMP's plan to initiate a produce export program and encouraged the team to meet with the airport's General Manager, Mr. Al. Haj Ghulam Ali (Timar) to see if there was any available parcel of land within the compound that would be suitable for RAMP's needs.

At the time of this report's completion, the assessment team had, with guidance from the RAMP's agriculture and infrastructure staff members, identified a suitable plot and had received approval from the Ministry of Civil Aviation and Tourism to begin lease negotiations with the airport. The General Manager of the airport made it clear to the

assessment team that if RAMP would like to proceed with this arrangement, the following two contracts would need to be negotiated:

1. **Kabul International Airport.** This contract will be comprehensive to cover lease of the land, management of the containers, 24 hour electricity, security, and any other maintenance matters RAMP deems necessary.
2. **Ariana Afghan Airlines.** This contract will employ Ariana's ground crew for the loading of produce onto the planes. When designing this contract it is important that we do not sign an exclusivity agreement with Ariana Airlines that only allows us to use Ariana aircraft to ship the produce. Should a charter flight offer better freight rates, we need to make sure we can take advantage of those offers.

If RAMP engages in contracts with both the airport and Ariana, then the cost / kg for exported commodities will rise, reducing the ability to set competitive prices for those exports in the UAE market.

### **Zamarai Rosi Ltd.**

As mentioned in a previous section, Zamarai Rosi is in the process of constructing a fruit and nut processing/packaging facility within a walled compound three km from the airport. If for some reason the airport negotiations do not proceed as planned, or if the contracts eventuate to be too cost prohibitive, Zamarai Rosi has offered to house storage containers free of charge and manage the facility for a nominal, un-discussed fee.

### **• Manufacturing / Installation**

On May 2 RAMP released a Request for Quotation (RFQ) directly to four different companies (International Multi Group of Companies, Red Sea, TRYCO, and MADECOR Group), and to one manufacturing proposal solicitation site ([www.processregister.com](http://www.processregister.com)) to compete the manufacture and installation of refrigerated containers. According to RAMP's procurement guidelines, the containers may be purchased second-hand by the vendor and then modified, however all refrigeration equipment and insulation material must be purchased new. The RFQ outlined the following requirements:

Manufacture, delivery to storage site within Kabul, and full installation of two (2) forty ft refrigerated containers reflecting the following specifications:

- Quantity - 2
- Dimensions – 40' X 8' X 8'.
- 6 inch thick polyurethane internal insulation.
- Installed sealable and locking refrigerator door on front of container with air curtain to minimize temperature change when loading and unloading.
- Incorporated with a 7.5 HP refrigeration system able to maintain a set temperature between the range of 30 to 50 degrees Fahrenheit, fitted with automatic blower to maintain uniformed circulation of refrigerated air over produce.
- Full installation includes the following assurances:
  - Leveling of chosen site to be suitable for installing refrigerated containers.
  - Proper connection to regulated 24 hour electricity source (RAMP will be responsible for identifying electricity source).
  - Complete assurance the facility is operating correctly.
  - Provision of maintenance warranty to cover services for up to one month after installation.

By the due date, of May 9, only two companies had submitted a responsive quote, International Multi Group of Companies (IMGC) and Red Sea. These companies are briefly described below, as are conclusions summarized from the proposal review session.

### **IMGC**

IMCG is a Pakistan based conglomerate comprising of nine firms, specializing in areas ranging from but not limited to food processing, rapid response rehabilitation and reconstruction programs, container manufacturing, equipment leasing, medical supplies, textiles, transport, and custom clearance consulting. IMGC has engaged in a number of US military and UN contracts, and is currently constructing consumable storage facilities in Kandahar and Bagram military base. IMGC has a liaison office in Kabul, and has already demonstrated impeccable customer service. The company is also available to provide logistical assistance for exporting produce once the construction of the facility is complete.

### **Red Sea**

Red Sea is a construction contracting firm run by Americans and based out of Kabul. The company currently has a number of US military contracts for constructing residential and consumable storage containers. Additionally, the firm is contracted to build

temperature and security sensitive storage containers for Roshan, the Afghan telecommunication company, and is responsible for the construction of the container offices on the RAMP compound. Red Sea submitted two proposals to this solicitation. One proposal is directly responsive to the above RFQ, and the other proposal addresses the required specifications, but is for a free-standing panelized refrigerated storage facility that is not constructed from 40 foot containers (schematics are included in appendix). The company is also available to provide logistical assistance for exporting produce once the construction of the facility is complete.

On May 18, a committee with participants from RAMP's agriculture and infrastructure department reviewed the quotations from Both IMGC and Red Sea. The following conclusions were met at the conclusions of the meeting:

- The RFQ as it was submitted on May 2 was not specific enough to the needs of the program. Before manufacture and installation of the containers commences, RAMP needs to refine the specifics and resubmit them to the selected company(s).
- RAMP will follow up with IMGC to see if the company is able to accommodate a leasing arrangement for the containers.
- Although the committee was intrigued by Red Sea's panelized storage facilities, many members were significantly displeased with the Red Sea's quality of work on the office containers the company installed on RAMP's compound. Members of the committee will visit Red Sea's manufacturing site to assess the proposal in greater detail.

## Packaging

While in Dubai, the assessment team made a concerted effort to collect packaging samples for all fruit that is sold in UAE and produced in Afghanistan. In answer to a question outlined in the tasks, there is no requirement for palletized transport of produce on airplanes or for storage in Dubai or Sharjah international airports. Currently in Kabul and surrounding areas, there are operating facilities that can manufacture cardboard boxes to any specification. However according to Naseeb and RAMP agriculturists, these facilities are not capable of producing boxes of a comparable quality to those found in Dubai markets.

The Kabul packaging facilities visited by the assessment team were exclusively used for making raisin boxes. However, the proprietor assured us that if RAMP provided them a sample of a box, they could mass produce them to any specification, ranging from 1 kilo to 100 kilo. They gave us a tour, showing each step, from the storing of massive paper spools from Sweden, to gluing and assembling the boxes. (This facility did employee a few children workers. I don't know if this is an issue, but definitely something to keep in mind).

Following is a description for each researched commodity of preferred packaging for shipping and for consumer point of purchase. All measurements are in centimeters.

- **Apple**

**Shipping:**

Fruit resting in single level card-board or plastic/polyurethane sectionalized trays of 20 - 44 in cardboard boxes, wrapped in cellophane. Some apple exporters of the highest quality wrapped the individual pieces of fruit in polyurethane nets.



**Point of sale:**

Loose fruit.



- **Apricot**

**Shipping:**

1.75 kg of fruit packed in a 2 kg closing cardboard box (22 x 18 x 9), with .25 kg of shredded paper surrounding the fruit.

Alternative method includes encasing loose fruit in 2 kg boxes (40 x 29 x 5.5 -7.5) with a 6.5cm flap folded over two sides for stacking, and wrapped in cellophane.



**Point of sale:**

Loose fruit.



- **Cherries**

**Shipping:**

Resting on a piece of thick cardboard (13 x 8) in a thin plastic tray (18 x 13 x 4) wrapped in cellophane. Two of these trays are nestled in a hard mesh plastic tray (28 x 20 x 4 – 8) with elevated corners and the two 20cm edge. Small trays are held in place with rubber bands. A thin cardboard label wraps around the perimeter of the hard plastic tray. Two other labels are sealed under the cellophane with the fruit.



**Point of sale:**

Plastic tray (18 x 13 x 4)



- **Grapes**

**Shipping:**

Grapes are incased in a thick cardboard box (24.5 x 17 x 8), and sealed with cellophane tape. Cardboard box is held together with 3 industrial staples on one side. On the bottom of the cardboard box is 2.5 cm of packed shredded paper. Grapes are wrapped in two intersecting sheets of thick tissue paper (70 x 24) (75 x 16) with one sheet sulfur paper (17.5 x 13). The sulfur paper's brand name for sample researched is UVASYS DUAL RELEASE and is designed specifically for grapes. Grapes are then wrapped in a sheet of perforated thin plastic (55 x 55), and then sealed in the cardboard box.

Alternative method includes polyurethane boxes wrapped in cellophane.



Alternative method includes polyurethane boxes wrapped in cellophane.



**Point of sale:** Thick, transparent plastic wraps with slits cut



- Peaches

**Shipping:**

Smaller peaches: 5-6 small peaches wrapped in cellophane on a polyurethane tray (9 x 5.25 x 1). Two of these rays are nestled in a thick cardboard box (12 x 9.25 x 3).



Smaller peaches are also shipped by some countries in polyurethane boxes wrapped in cellophane



Larger peaches: Same as large apricots. Larger peaches are packaged in polyurethane or cardboard trays holding count of 17, 18, or 20 and shipped in 2 kg boxes.



**Point of sale:** Loose fruit or polyurethane trays of 5 wrapped in cellophane. Or Loose fruit.



- **Plums**

**Shipping:** Plums are most often shipped in a manner similar to cherries. The fruit is resting on polyurethane trays, resting in hard plastic baskets, wrapped in cellophane and secured with rubber bands.



**Point of sale:** Loose Fruit



- **Pomegranates**

**Shipping:** 12 pomegranates resting on 4.5cm of tightly packed shredded paper, and one sheet of thick tissue paper (72 x 48). More shredded paper is tightly packed on top of the fruit. All are in a cardboard box (40 x 29 x 11), sealed with cellophane tape and 2 plastic binding strips. 12 industrial staples on 2 opposing corners hold the box shut.



**Point of sale:** Loose fruit.



## Transport

RAMP management became initially interested in exporting produce to the UAE because it became apparent that Afghanistan was importing so many commodities and goods, however nothing was being exporting. Consequently, Ariana Airlines and other carriers were leaving Kabul to UAE with empty cargo hulls. These airlines were recovering all their costs through imports to Afghanistan, and were therefore in a position to offer reduced freight costs returning to UAE. By the time of this report's submission, the assessment team was only able to get freight costs and schedules to UAE from Ariana airlines. Further investigations are necessary to get accurate freight costs from chartered

airlines that depart empty from Kabul to UAE to identify the carrier which offers the most competitive rates. Other bodies that warrant further research are UN airlines, chartered flights, and military flights.

### **Ariana Afghan Airlines**

Ariana Afghan Airlines is the country's national carrier, flying from Kabul Amritsar, Baku, Delhi, Dubai, Dushanbe, Islamabad, Istanbul, Frankfurt, Jeddah, Moscow, Sharjah, Tehran, and Urumqi. Although USAID has heard word that international commercial flights will begin originating in Kandahar, Mr. Alami of the Ministry of Civil Aviation and Tourism has confirmed that this will not happen any time in the foreseeable future. On April 13, the assessment team met with the Cargo Manager, Abdul Satter Samadi, and the General Sales Manager, Massood Wahedy, of Ariana Afghan Airlines. The Ariana representatives expressed an interest in RAMP's export intentions, because the program appears to be beneficial to large portion of the Afghan population, and not just a few companies. The company is looking forward to exploring mutually beneficial arrangements with RAMP. Without negotiations, Ariana was prepared to offer RAMP "special rates" of 35 cents/kg for fresh fruit, and 50 cents/kg for dried fruit and nuts.

Mr. Abdul Sattar Samadi, Cargo Manager for Ariana explained that the airline offers less expensive prices for fresh cargo because:

1. It is an incentive to ship fresh fruit as soon as possible so it does not spoil.
2. They are currently exporting very little fresh produce compared to dried commodities, so they encourage fresh produce traders to export by offering a low price.
3. Fresh produce requires more packaging than dried commodities, therefore it occupies more space in the cargo hull, but has a relative less weight.
4. The airline has set these cargo rates according to international standards.

Although these rates are significantly better than the 60 cents/ kg that TRYCO offered RAMP's Agribusiness Advisor in 2003, the freight costs are still quite high compared to ground transport costs that Middle Eastern countries are pay to export the same produce to UAE.

Ariana currently owns three Airbus A300/B4, four Boeing 727-200 Advance Series, and one Antonov 24. Two pallets and 14 containers can be loaded in the lower holds and about nine tones of cargo can be carried on the aircraft. The aircraft can fly over a distance of 3,900 kilometers while carrying a payload of 31 tones.<sup>14</sup> Following is a schedule of Ariana flights from Kabul to UAE.

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<sup>14</sup> Ariana Afghan Airlines website: <http://www.flyariana.com/fleet.htm>

**Table 6. Ariana Flight Schedule from Kabul to UAE\***

Destination	Day	Flight	Departure	Arrival	Aircraft
Dubai	Saturday	FG401	11:30	13:30	AB300
Dubai	Tuesday	FG403	11:30	13:30	AB300
Sharjah	Sunday	FG405	11:30	13:30	B727
Sharjah	Sunday	FG415	15:30	17:30	N/A
Sharjah	Wednesday	FG405	11:30	13:30	B727

\*All information is from Ariana Afghan Airlines website (<http://www.flyariana.com/destinations.htm>) and RAMP logistics office. Flight schedule is subject to change.

## **VI. Conclusions and Recommendations**

As outlined in the introduction of this report, the assessment team was to complete three primary tasks:

- 1) Conduct baseline legal and procedural research pertaining to requirements necessary to air-freight fresh produce from Kabul to UAE.
- 2) Assess the current logistical and legal mechanisms now extant in Kabul as they relate to cold storage and export of fresh produce.
- 3) Travel to UAE and initiate formal contacts with produce businessmen.

These tasks were accomplished successfully and document in the previous sections of this report. The assessment team also collected a variety of market data which illustrates those Afghan commodities that have the greatest market potential in UAE, specifically with regards to their individual production costs and wholesale prices at the time of reporting.

Previously the price / cost ratio of the individual commodities was illustrated, inconclusive of the air freight quotes provided by Ariana Afghan Airlines. The following table expresses the margins for each commodities, inclusive of freight costs.

**Table 7. Estimated Wholesale Price Structure for Exporting Select Afghan Fruit to UAE**

Commodity	Weighted Average Production Cost \$US / Kg*	International Air Freight Cost \$US / Kg**	Wholesale Price \$US / Kg***	Margin
<b>Apple</b>	\$0.11	\$0.35	\$1.43	\$0.97
<b>Apricot</b>	\$0.08	\$0.35	\$1.64	\$1.21
<b>Cherries</b>	\$0.15	\$0.35	\$1.64	\$1.14
<b>Grapes</b>	\$0.19	\$0.35	\$2.60	\$2.06
<b>Peach</b>	\$0.17	\$0.35	\$0.82	\$0.30
<b>Plum</b>	\$0.17	\$0.35	\$1.91	\$1.39
<b>Pomegranate</b>	\$0.13	\$0.35	\$3.50	\$3.02

\*Data is provided by RAMP Monitoring and Evaluation Specialist, Dr. Teshome Lemma who collected information from RAMP Agriculturists and Project Manager.

\*\*Freight costs quoted by Ariana Afghan Airlines

\*\*\*Wholesale prices are an average of prices quoted by wholesale traders between May 8 and May 12 at Dubai's Hamriyah Wholesale Market. Prices were quoted in UAE Dirhams and converted to US Dollars (1US\$ = 3.66 dh)

### **Analysis, to be elaborated on**

The assessment team does recognize that the analysis of any data can only be as accurate as its source and the methods used to collect it. However, particularly given the lack of uniform quality in Afghan produce, and lack of appropriate packaging facilities available, lack of significant profit margins, RAMP's involvement in a fresh fruit export program to UAE this growing season seems like a rather risky undertaking.

The final sections of this report outline recommended steps that RAMP should pursue to ready Afghanistan's agriculture sector for export programs in upcoming growing seasons.

## **Recommendations (To be elaborated on)**

1. Work with the Ministry of Agriculture to establish a phyto-sanitary certification system.
2. Direct more resources to enhancing the quality of Afghanistan produce to a competitive quality, focusing on agriculture technology transfer, sorting/grading practices, and packaging facilities.
3. Enhance packaging and processing facilities in Afghanistan.
4. Develop a baseline study for conducting similar studies in other markets.
5. Focus more on exporting nuts to UAE.
6. Revisit the idea of establishing cold storage facilities at the airport.