

**Rebuilding Agricultural Markets Program
(RAMP)**

DRAFT

**Afghanistan
Poultry Sub-sector Assessment**

Findings and Recommendations

April, 2004

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Submitted to:

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TABLE OF CONTENTS

ACRONYMS	4
TERMINOLOGY AND ASSUMPTIONS	4
SUMMARY FINDINGS, OPPORTUNITIES AND RECOMMENDATIONS	5
THE POULTRY SUB-SECTOR IN AFGHANISTAN	5
TABLE EGG SITUATION.....	5
FROZEN CHICKEN MEAT SITUATION	6
OPPORTUNITIES	6
RECOMMENDATIONS.....	7
A. INTRODUCTION	8
A1. POULTRY SUB-SECTOR ASSESSMENT GOAL AND OBJECTIVES.....	8
A2. CONCEPTUAL OVERVIEW OF A POULTRY SUB-SECTOR TRANSITION	8
A3. ASSESSMENT METHODOLOGY	9
B. AFGHANISTAN POULTRY SUB-SECTOR SITUATION	11
B1. OVERVIEW	11
B1. POULTRY MARKET STRUCTURE.....	12
B2. MAJOR CONSTRAINTS ON POULTRY SUB-SECTOR DEVELOPMENT	14
B3. POULTRY ENTERPRISES.....	15
C. WHOLESALE - TABLE EGGS	17
C1. OVERVIEW	17
C2. TABLE EGG IMPORTERS/WHOLESALERS	17
C3. TABLE EGG IMPORT OPERATIONS	18
C4. PRICE STRUCTURE.....	19
D. RETAIL - TABLE EGGS	20
D1. OVERVIEW.....	20
D2. TABLE EGG RETAILERS	20
D3. TABLE EGG RETAIL SYSTEM.....	21
D4. PRICE STRUCTURE	21
E. WHOLESALE - FROZEN CHICKEN MEAT	23
E1. OVERVIEW	23
E2. FROZEN CHICKEN MEAT IMPORTERS/WHOLESALERS	23
E3. FROZEN CHICKEN MEAT IMPORT OPERATIONS.....	24
E4. PRICE STRUCTURE.....	25
F. RETAIL - FROZEN CHICKEN MEAT	26
F1. OVERVIEW	26
F2. FROZEN CHICKEN MEAT RETAILERS	27
F3. FROZEN CHICKEN MEAT RETAIL OPERATIONS.....	27
F4. PRICE STRUCTURE.....	28

G. LIVE POULTRY	29
G1. OVERVIEW.....	29
G2. LIVE POULTRY MARKETS	30
H. RECOMMENDATIONS FOR POULTRY SUB-SECTOR DEVELOPMENT.....	31
H1. OPPORTUNITIES	31
H2. RECOMMENDATIONS	31
H3. RATIONALE	34
H4. POTENTIAL BENEFITS.....	35
ANNEX A. MARKET PRICES.....	36

Acronyms

COP	Chief of Party
CTO	Cognizant Technical Officer
DCA	Dutch Committee for Afghanistan
GOA	Government of Afghanistan
MAAH	Ministry of Agriculture and Animal Husbandry
RAMP	Rebuilding Agricultural Markets Program
SOW	Statement of Work
TISA	Transitional Islamic State of Afghanistan
USAID	United States Agency for International Development
USDA	U.S. Department of Agriculture

Terminology and Assumptions

- Pullet is a female chicken not yet in egg production
- Hen is a female chicken laying eggs
- Parent breeder stock, are mixed male and female chickens producing fertile eggs to be set in incubators for hatching
- Straight run means mixed male and female chickens
- Layer type chickens are a breed with egg production traits
- Broiler type chickens are a breed with meat production traits
- Dual purpose breed is a breed of chicken with a mix of egg and meat production traits
- Spent hens are hens that have finished their egg production cycle and are ready for slaughter
- Halal is an Arabic word meaning lawful or permitted.
- Haram, which means unlawful or prohibited. Halal and haram are universal terms that apply to all facets of life. However, these terms are often used in relation to food products, meat products, cosmetics, personal care products, food ingredients, and food contact materials. All foods are considered Halal except the following, which are haram: swine/pork and its by-products, animals improperly slaughtered or dead before slaughtering, animals killed in the name of anyone other than ALLAH (God), alcohol and intoxicants, carnivorous animals, birds of prey and land animals without external ears, blood and blood by-products, foods contaminated with any of the above products
- The *hawala* system, an informal financial system that is efficient, low-cost, and unregulated. For example, a person in Kabul goes to an agent (hawaladars) in the Kabul money market and asks for the transfer of funds. Through a centralized record-keeping system the Kabul money market, funds are transferred to an agent in Pakistan and given to the table egg farmer at the remote location.
- Conversion rate of \$1.00 equals 48 Afghanis
- Conversion rate of \$1.00 equals 57 Pakistan Rupees

Note: The author would like express his thanks to the FAO Livestock Office in Kabul for facilitating meetings with poultry producers in Kabul, Kunduz, Jalalabad, Mazar, and Herat. The FAO, National Poultry Production Project also assisted in the provision of market information from Kandahar and Kabul. In particular I would like to thank Mr. Haroon Nessar and Dr. Olaf Thieme for their assistance.

Summary findings, opportunities and recommendations

This section summarizes the major findings of the poultry sub-sector assessment, identifies opportunities that can be targeted as part of a poultry improvement program, and presents concise recommendations for private poultry enterprise development.

The poultry sub-sector in Afghanistan

- It is estimated that 98% of the national flock of 12 million chickens are reared under a backyard scavenger system with little or no provision of feed or medications
- The estimated value of the 510 million eggs produced by the national flock is \$42.5 million.
- The estimated live body weight value of the national flock is \$58.3 million
- There are no commercial parent breeder farms in Afghanistan
- There are only three small feed mills in Afghanistan
- There are an estimated 250 small (200 to 400 egg capacity) artisan incubators and only one commercial hatchery (25,000 egg capacity) that operates part time.
- There are an estimated 10 to 15 semi-commercial layer farms with 135,000 layers producing 24 million eggs per year
- There are strong seasonal effects on poultry production and demand for poultry products, with the highest demand and prices occurring during the winter months.

Table egg situation

The opportunity to capture market share of a growing table egg market is underscored by the following findings:

- The estimated supply of imported table eggs in Afghanistan is 200 million eggs a year and growing.
- Kabul consumes nearly half of the total table egg imports (91 million eggs per year)
- The estimated wholesale value of table egg imports was \$10,648,000
- The estimated retail value of table egg imports was \$12,818,000
- The Afghan consumer prefers local brown shelled eggs over imported white shelled eggs and is willing to pay a 20% premium in urban areas.
- The consumer values egg freshness and will seek out farm fresh eggs from vendors.
- Table egg supply is really a reflection of demand due to a lack of refrigeration, a minimum amount of available working capital, and limited wholesale storage space. There is a real need to distribute eggs through wholesale – retail channels on an almost daily basis.
- Retail table egg gross margins are high enough to ensure that distribution of Afghan produced table eggs will be efficient.

Frozen chicken meat situation

Importing frozen chicken meat into Afghanistan began in earnest over the last two years and has experienced increasing growth on a monthly basis. The provision of relatively cheap meat in most provincial centers has been good for consumers.

- The estimated supply of frozen chicken meat in Afghanistan is 49,732 tons per year and growing
- Kabul consumes nearly half of the imported frozen chicken meat (23,244 tons per year)
- The estimated wholesale value of the imported frozen chicken meat was \$72,608,000
- The estimated retail value of the imported frozen chicken meat was \$78,359,000
- Imports consist of about 80% leg quarters, mostly from the US and 20% whole chickens, mostly from Brazil.
- Market channels for imports are primarily through Herat city, through Iran with some imports into Mazar, through Turkmenistan, and through Uzbekistan.
- Wholesalers have invested in cold storage infrastructure in Herat and in freezer containers for trucking and storage in Kabul and Mazar.
- Wholesalers work closely with retailers on the distribution and sales of products and often provide short-term credit.
- The importing of frozen chicken meat from the US and Brazil, through brokers in either Dubai or Turkey, is an extremely efficient system with competitive meat prices for Afghan consumers.
- Competing with frozen chicken meat importers in meat markets will be challenging for local poultry producers.
- As with the table egg situation, the frozen chicken meat supply is really a reflection of demand due to a lack of refrigeration, a minimum amount of available working capital, and limited wholesale storage space.

Opportunities

The following list of opportunities is derived from the assessment findings and provides general direction for an Afghanistan poultry improvement program.

- Capturing a share of the expanding table egg market with the production of brown eggs. (local eggs are browner than white imported eggs)
- Utilizing dual purpose breeds for table eggs and spent hens for live bird markets.
- Developing feed milling enterprises to meet the growing number of poultry producers.
- Developing hatchery enterprises to meet the demand for day-old chicks.
- Developing replacement pullet production enterprises to meet the demand for replacement pullets.
- Improving live poultry markets in order to reduce the spread of avian diseases.

Recommendations

The following recommendations would be made on a provincial basis, that is to say, that all the recommendations would be implemented in full in each province. In order to have national impact it is suggested that activities be implemented in no less than 10 provinces.

Recommendation #1. Design and develop demonstration poultry production enterprises on a model farm in collaboration with the Ministry of Agriculture and Animal Husbandry (MAAH) in each proposed province.

Recommendation #2. Design and implement a series of poultry production and enterprise management courses.

Recommendation #3. Design and develop poultry enterprise business plans that include financial statements that can be used for accessing finance and for enterprise management.

Recommendation #4. Work closely with municipal governments in each proposed province on the improvement of live poultry marketplaces.

Recommendation #5. Provide technical assistance to existing and potential commercial poultry production investors.

Recommendation #6. Integrate veterinary services supported by RAMP with the poultry development program.

Recommendation #7. Ensure enterprise coordination within each provincial poultry improvement program.

A. Introduction

This section defines the poultry sub-sector assessment goal and objectives as they relate to the Rebuilding Agricultural Markets Program (RAMP) goals. The author also presents a conceptual view of four distinct types of poultry systems in order to characterize for the reader a realistic understanding of how poultry systems transition from extensive to intensive husbandry practices over time.

A1. Poultry sub-sector assessment goal and objectives.

The goal of this assessment is to collect sufficient information that can be used to define an approach for USAID to support the sustainable development of the poultry sub-sector in Afghanistan while meeting the two main RAMP operational objectives of increasing agricultural productivity and output, and increasing incomes through effective linkages among producers, processors, and markets.

The specific objective of this assessment was to answer the following questions:

- What is the volume of poultry products (eggs, meat, live chickens) found in the primary urban markets of Afghanistan?
- What are the marketing channels used to supply these markets?
- What is the estimated value of these products?
- Can private poultry enterprises invest and be profitable within these markets?

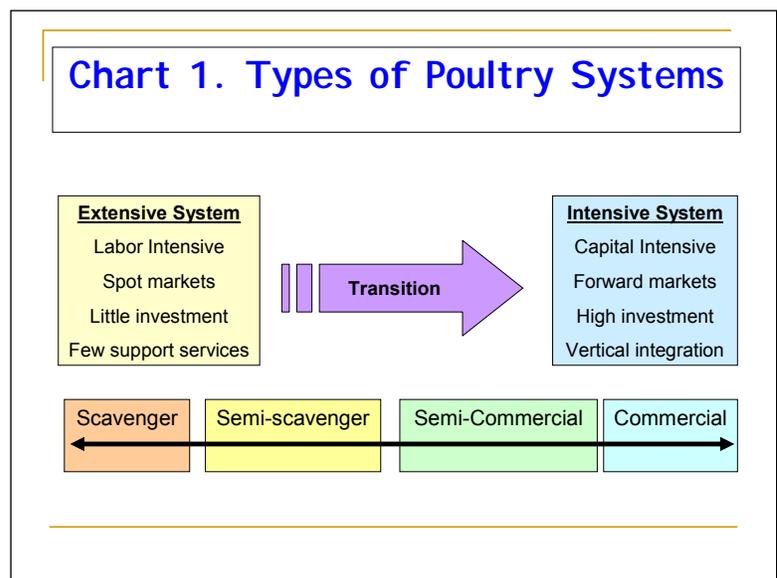
A2. Conceptual overview of a poultry sub-sector transition

Poultry production systems evolve or transition over time due to the prevailing conditions in a given country. Conditions include macro and micro-economic factors, availability of appropriate education and support services, and market demand for products.

The following four types of systems are defined in general terms (Chart 1) to help the reader understand the basic requirements of one system transitioning to a more intensive system.

a) *Backyard scavenger system.*

The primary poultry production system in Afghanistan is by far the traditional backyard system where women raise small numbers of domestic fowl for home consumption with small, mostly seasonal surpluses being sold in village markets. Birds scavenge around the household for whatever source of food they



can find. Flock size is usually less than 10 birds and the hens each produce about 60 eggs per year. Domestic fowl, compared to improved breeds, are relatively disease resistant however mortality rates are usually high. This backyard system is defined as an extensive system, whereas commercial systems are defined as intensive systems.

b) Semi-scavenger system. A semi-scavenger system is the next step in the transition towards commercial poultry activities. In this system dual purpose birds (bred for meat and egg production) are managed in rudimentary housing with basic equipment, are supplied with at least fifty percent of their feed needs, and receive medications. Flock size ranges from 10 to 500 birds with mixed breeds and average egg production is in the range of 125 to 150 eggs per year. The FAO poultry improvement project supported by RAMP trains women poultry producers in poultry management practices appropriate for a semi-scavenger system.

c) Semi-commercial system. A semi-commercial system transitions the poultry producer to more intensive management practices. Typically, these systems are small-scale and range in size from 500 to 5,000 birds that are housed in total confinement and provided with all of their feed needs. This system is usually utilized by producers that have transitioned from semi-scavenger systems and have developed their management capabilities, found market outlets for their products, and can obtain working capital for purchasing their feed needs.

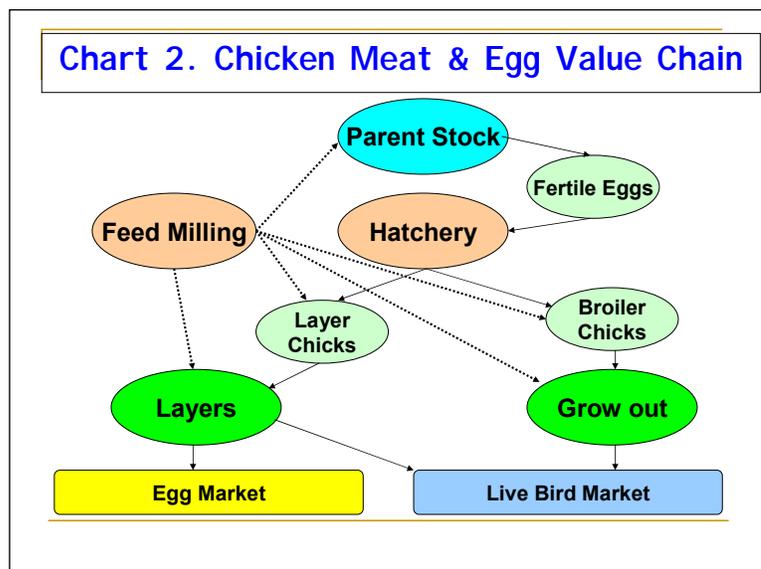
d) Commercial system. Commercial systems are large-scale production operations utilizing capital intensive equipment and technologies. These systems often vertically integrate production, processing, hatchery, and feed mill functions into a self contained and independent system.

A3. Assessment methodology

Wholesaler and retailer surveys for eggs, frozen chicken meat, and live poultry were conducted in Kabul, Jalalabad, Kunduz, Mazar, Kandahar, and Herat. Information from Kandahar was collected by the FAO. In depth interviews with wholesalers and retailers added anecdotal information to the survey data. Over 20 retail surveys were conducted in Kabul, the largest market in Afghanistan for poultry products, in order to identify within city price variations and to gauge the effectiveness of egg and meat distribution systems.

Value chain approach (Chart 2).

The methodology used in this sub-sector assessment involved analysis of all elements of a commodity (chicken eggs and meat) value chain. Emphasis was placed on the vertical sequences of production, processing, and market distribution entities. This approach also included the policies which structure the incentives for exchanges, risk management, dissemination of information, and



innovation. The value chain depicting the poultry situation in Afghanistan in Chart 2 does not include processing (eggs and meat) or food services. This is because the primary markets in Afghanistan today are the table egg and live bird markets. These markets are primary for two major reasons: 1) the lack of refrigeration throughout the country and 2) the cultural practices of slaughtering live chickens at home according to the halal practice.

Poultry sub-sector participants.

This section identifies and briefly defines roles of the participants in the poultry sub-sector in Afghanistan, they are:

Village producers – Rear fowl under mostly scavenger and semi-scavenger systems.

Village-based table egg and live bird assembler/traders – Local traders who purchase from village producers surplus eggs and live birds (not consumed by family or sold in village markets) for sale in urban markets.

Peri-urban based producers – Rear fowl under semi-commercial systems and market produce from their home or through local market channels.

Urban wholesalers of imported table eggs – Importer/wholesalers of table and fertile eggs from regional countries, mainly Pakistan and Iran, and distribute them in urban markets.

Urban wholesalers of imported frozen chicken meat – Importer/wholesalers of frozen poultry meat from international markets, mainly USA and Brazil, and distribute them in urban markets.

Urban semi-wholesalers of table eggs – Sellers of large quantities of table eggs, obtained from wholesalers, in large central urban markets.

Urban retailers of table eggs and frozen meat – Sellers of small quantities of table eggs, obtained from wholesalers or semi-wholesalers, in small stores throughout the urban area.

Urban semi-wholesalers of imported live birds – Importer/wholesalers of live birds from regional countries, mainly Pakistan and Iran, and distribute them in large central urban markets.

Urban live bird retailers – Small vendors of imported or village live fowl, obtained from semi-wholesalers or village live bird traders, in small markets throughout the urban area.

Rural and urban veterinary services – Veterinary field units, supported by RAMP through the DCA livestock health, production, and marketing activity, provide poultry vaccination and medication programs that are imperative for the success of all types of poultry production systems.

B. Afghanistan poultry sub-sector situation

This section provides an overview of the current state of the national flock, describes seasonal effects on demand, defines the primary poultry market channels and structure, and characterizes semi-commercial and commercial activities in Afghanistan.

B1. Overview

National flock estimates.

The Afghanistan Livestock Survey conducted by FAO in 2003, estimated the national flock to be 12,155,846 chickens, with an average of 3.99 chickens per family. This number does not include the number of ducks, geese, guinea fowl, turkeys, partridge and other poultry kept by both rural and urban dwellers.

It is possible to make a gross estimate of the productive capacity of the national flock as follows:

- Table egg estimates. We can assume that the national flock of 12,155,846 chickens contains 70% hens and 30% cockerels raised under a scavenger management system with an average of 60 eggs produced per hen per year. Thus the national flock can produce about 510 million eggs a year. Furthermore, if the average retail price of a “local egg” is 4.0 Afs, then the gross retail value of eggs is estimated to be \$42.5 million.
- Live bird estimates. We can assume the average live weight of a village chicken to be 1.5 kilograms and the average retail market price to be 154 Afs (\$3.21) per kilogram. Thus the national flock would weigh 18,233 metric tons and be valued at \$58.5 million.

Poultry production inventories.

- Parent stock for fertile egg production.
 - There are no commercial parent flocks in Afghanistan with improved breeds of chickens.
 - Semi-commercial layer flocks utilizing dual purpose chickens do produce fertile eggs for sale to owners of incubators and villagers who place the fertile eggs under village scavenger chickens that are brooding over a clutch of eggs.
- Hatcheries.
 - There are an estimated 250 small locally made incubators with a capacity of 200 or 400 eggs per incubator. These are hot water systems heated with kerosene or diesel fuel. Many small incubator owners do not operate these small incubators during the winter months when the costs to run the incubators are too high.
 - There are an estimated 2 or 3 medium sized incubators with the capacity of 20 to 27,000 eggs in Afghanistan. Only one incubator of this size was operational at the time of the assessment.

- Feed mills.
 - There are FAO supported feed mills in Kabul, Jalalabad, Kandahar, and Mazar. These mills are small (6 to 8 tons per day) and mixing is completed by hand shovel.
 - There are hundreds of local wheat millers throughout Afghanistan capable of grinding major feed ingredients for village producers. Grinding feed ingredients is not the same as feed milling which requires mixing of ingredients according to prescribed feed formulas.
 - Feed formulation in Afghanistan is a relatively primitive activity in that the nutrient profile of local feed ingredients is not known. Feed quality in terms of meeting dietary requirements is therefore questionable and results in production lower than the genetic capacity of the birds.

- Semi-commercial layer farms
 - There are an estimated 10 to 15 layer farms in each of the six major provinces with an average of 1,500 hens per farm. This means there are an estimated 135,000 layers in Afghanistan under a semi-commercial system. These farms could be producing an estimated 24 million eggs per year.
 - Members of the Kabul Poultry Association (supported by FAO) have about 21,000 layers with the five largest having about 2,500 layers each.

Seasonality.

Live bird and egg prices (both table and fertile egg prices) are highest during the winter months and lowest during the summer. Marketers of poultry products indicate that the price of table eggs can drop by over 20 percent and live bird prices can decrease by 15 percent during the summer months. Quantities of imported table eggs and frozen chicken meat are reduced in line with demand for these products throughout the summer. Demand for poultry products and thus prices, decline during the summer months for two fundamental reasons. First, the availability of a variety of locally produced and imported fresh food items (fruit, vegetables, milk) increases during this period. Also, village scavenger poultry have more insect and plants available to scavenge for and thus begin to produce more eggs.

B1. Poultry market structure

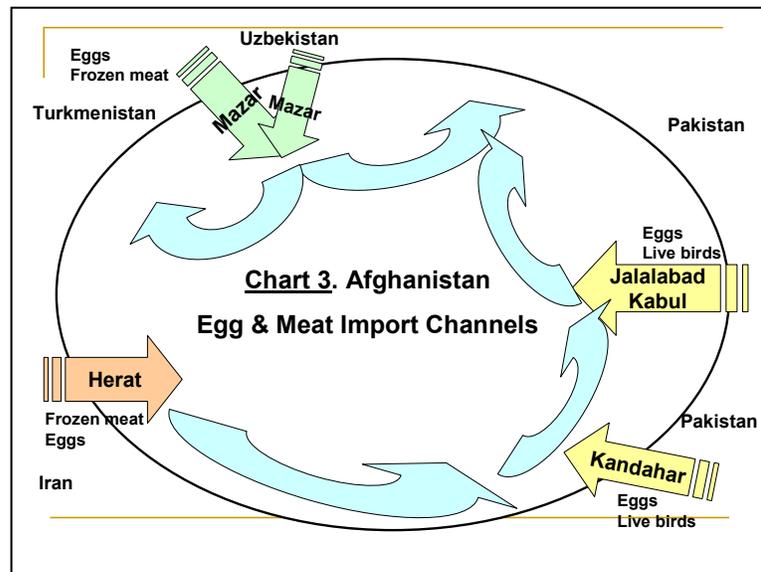
A general model of the poultry marketing structure for imported and domestic poultry products through various market channels in Afghanistan is presented in this section.

Market channels for imported poultry products (Chart 3)

Imports of poultry products into Afghanistan are made through four primary gateways – Kabul, Kandahar, Herat, and Mazar. Table eggs, fertile eggs, and live birds are imported from Pakistan by importers into Kabul and Kandahar by importers/wholesalers who organize distribution to the major urban areas.

Table eggs from Iran and frozen chicken meat from the US and Brazil are imported through Herat and Mazar-i-sharif.

Wholesalers in Mazar import table eggs from Iran and frozen chicken meat through primarily Turkmenistan, although a few wholesalers import frozen meat through Uzbekistan. The importers in Mazar then distribute eggs and frozen meat throughout the northern provinces of Afghanistan. Table egg importers from Mazar (Iranian eggs) and Kabul (Pakistani eggs) compete for market share in the Northern provinces near Kunduz.

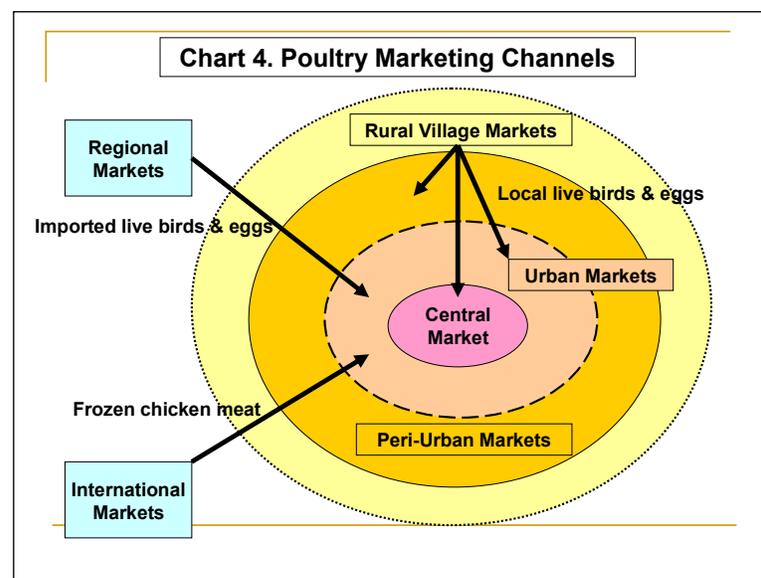


The city of Herat is the major location for the imports of frozen chicken meat and table eggs from Iran. Importers have constructed cold storage facilities and have established business relationships with frozen chicken meat brokers in Dubai and Turkey.

Market structure for domestic poultry products (Chart 4)

The domestic production of table eggs and live chickens is largely rural based with growing capacity in peri-urban and urban markets. Village-based scavenger and semi-scavenger systems are owned and operated by women. Semi-commercial poultry producers are exclusively men and are based in urban and peri-urban areas.

Village-based assemblers purchase eggs and live chickens from individual rural households or in rural village markets. They then organize temporary storage and transportation to urban central markets. These assemblers/traders will primarily sell the eggs in bulk to retailers and shop owners and sometimes they will sell eggs directly to consumers in the central markets. Live chickens are most often sold directly by the assemblers to consumers in urban markets, and sometimes in bulk to retailers in the urban live poultry markets. The term assembler/trader is used because these market intermediaries will sometimes purchase general store items in the urban markets after selling the eggs and live chickens. They then use these items (often products for women) to trade with village producers for eggs and chickens.



Village assembler/traders do receive a good income for their services. For example, an assembler marketing a basket of 360 eggs (30 dozen) a week can obtain on average a gross margin of \$6.0 dollars or 288 Afs (based on a \$0.20 average gross margin). Depending upon transportation and other costs, this gross income for a rural villager is good.

Table 1. Estimated village assembler table egg prices and margins

Eggs \$/dozen	Avg.	Kabul	Jalalabad	Kunduz	Mazar	Herat
Buy	\$0.84	\$1.08	\$0.93	\$0.81	\$0.75	\$0.63
Sell	\$1.04	\$1.31	\$1.16	\$1.00	\$1.00	\$0.75
Margin	\$0.20	\$0.23	\$0.23	\$0.19	\$0.25	\$0.12

If the village assembler/trader purchases 10 chickens with an average weight of 1.5 kilograms (15 kilograms total live weight) during the egg assembly process, the gross margin from the live bird sales would be \$11.10 or 533 Afs (\$0.74 average gross margin). Thus the village assembler who collects 360 eggs and 10 live chickens will have a gross profit margin of \$17.10 or 821 Afs per week.

Table 2. Estimated village assembler live chicken prices and margins

Birds \$/Kg	Avg.	Kabul	Jalalabad	Kunduz	Mazar	Herat
Buy	\$2.46	\$2.09	\$2.36	\$2.56	\$2.78	\$2.50
Sell	\$3.20	\$2.78	\$2.95	\$3.47	\$3.47	\$3.33
Margin	\$0.74	\$0.69	\$0.59	\$0.91	\$0.69	\$0.83

B2. Major constraints on poultry sub-sector development

This section lists and briefly defines the major constraints on poultry sub-sector development in Afghanistan.

Knowledge of poultry production practices – The current level of knowledge of modern or even basic poultry husbandry practices is extremely low. The university education system is minimal and antiquated with a focus on health issues and not management practices. Importers and wholesalers interviewed during the assessment expressed interest in developing poultry production businesses but recognized the risks involved and their own lack of knowledge for managing such a business.

Access to finance - Potential poultry enterprise developers are constrained by a lack of available finance for investments in fixed assets and working capital. Many of the entrepreneurs interviewed during the assessment who are involved in the poultry sub-sector stated that they have sufficient funds for their current operations but not for further investment.

Poultry diseases – The poultry disease situation in Afghanistan is extensive where numerous endemic diseases run rampant throughout the country. The disease situation is confounded by the lack of sound poultry management practices that emphasize disease prevention and bio-security programs as fundamental activities for any production enterprise.

Feed milling enterprises – Poultry production in Afghanistan can not develop significantly without a reliable supply of quality poultry feed rations that are competitively priced. Such enterprises do not exist in Afghanistan today and are a prerequisite to sub-sector development.

Hatchery enterprises – Semi-commercial poultry producers either import day-old chicks from Pakistan or utilize inefficient incubators for chick production. This current system does not allow for a significant volume of chicks into the market for production enterprise development. One incubator manager explained a common problem when purchasing local fertile eggs. He stated that villagers will mix un-fertile eggs with the fertile eggs because the price of a fertile egg is much higher. This lowers the hatchability of the eggs set in the incubators.

Parent stock for fertile eggs - Hatcheries require a reliable and regular source of high quality fertile eggs for their incubators. There are no improved breed parent flocks in Afghanistan producing fertile eggs. Fertile egg production is often under the direct control of the hatcheries to ensure a consistent source of quality fertile eggs.

B3. Poultry enterprises

This section provides a characterization of semi-commercial and commercial poultry producers and gives specific examples of these enterprises in Afghanistan.

Semi-commercial poultry producers (Picture 1)

The example of a typical semi-commercial poultry producer in Afghanistan today is a person with 500 to 2,000 dual purpose layers (Picture 1). Flocks are usually housed in adobe brick buildings near or in the owner's home compound. Mixed breeds of red feathered chickens producing brown eggs are provided feed and water and are kept on a deep litter floor and not in cages. Flocks are comprised of hens and the appropriate number of males that provide the producer with the option of selling either table or fertile eggs. The use of dual purpose chickens also ensures receiving a high price for spent hens after a full first year of egg production because of a larger body weight for dual purpose birds. Rural villagers prefer purchasing this type of spent hen because they can either consume the chickens or keep them for egg production. These layers will produce for a second or even third cycle depending on feed and health conditions.



Commercial poultry producers

There are only two commercial poultry facilities in Afghanistan and as of April 2004 neither of them is operational.

Picture 2. Bagrami commercial poultry facilities, Kabul province.

The Bagrami poultry facility sits on 8 hectares of land and was built by the Chinese over thirty years ago. The MAAH has negotiated a lease option to experienced private Afghani poultry producers. The facility has been largely looted of equipment and roofing but not destroyed. The facility includes a water tower, buildings for a feed mill, hatchery, administration unit, power plant, and brooders. The hatchery and feed mill equipment, as well as the water pump and electric lines, have all been removed or destroyed. There are two dark-out houses (13m x 70m) for breeders and 16 broiler type houses (6m x 33m). A considerable investment is required to make the Bagrami farm operational.



Picture 3. Badam Bagh commercial poultry facilities, Kabul province.

The Badam Bagh poultry facility is owned by the MAAH and has been empty for over 12 years. The facilities are in excellent condition and include two layer houses capable of holding 11,500 layers each (23,000 total), complete with automatic Bulgarian-made cage systems. Layers in production could produce over five million eggs per year. There are also two 864 square meter broiler houses that can hold a total of 25,000 broilers. There is a feed mill, generator, and water well on the farm site. The MAAH has reportedly leased this facility to an Iranian business person. Although the contract was negotiated in mid 2003, no investment in housing chickens has been made to date.



C. Wholesale - table eggs

This section summarizes the process of importing and wholesaling of table eggs into Afghanistan. Quantity and price information was collected from the major wholesale markets in Kabul, Herat, Mazar, and Kandahar. Information from Kandahar poultry marketers was supplied by the FAO.

C1. Overview

There were an estimated 200 million table eggs imported by wholesalers into Afghanistan during 2003 (Table 3). Importers interviewed indicated that the 2003 volume of imported table eggs was at least 10% higher than 2002 imports and the market continues to expand.

Total table egg imports for 2004 will be affected by the GOA ban on importation of eggs and live birds from Pakistan for about a five week period in March/April. This ban was due to the outbreak of avian influenza in Pakistan and had a dramatic negative effect on consumer demand for both eggs and chicken meat.

Table 3. Estimated 2003 egg imports, with estimated wholesale and retail values.

Egg Imports per year	Total	Kabul	Kandahar	Mazar	Herat
Imports, #	~200 million	~91 million	~33 million	~29 million	~47 million
Wholesale Value, \$	~\$10,648,000	~\$5,400,000	~\$1,727,000	~\$1,800,000	~\$1,721,000
Retail Value, \$	~\$12,818,000	~\$6,400,000	~\$2,073,000	~\$1,900,000	~\$2,445,000

C2. Table egg importers/wholesalers

The major table egg importers/wholesalers are located in Kabul, Kandahar, Jalalabad, Herat, and Mazar. There are many minor egg importers/wholesalers located in some of the secondary cities in Afghanistan. Eggs are imported from either Pakistan or Iran depending upon the primary business location of the importers and economic factors, such as transportation costs. In general terms, egg imports to Jalalabad are uniquely from Pakistan; Kandhar and Kabul markets are largely from Pakistan; and eggs imported to Herat and Mazar are uniquely from Iran. Egg importers in the large Kabul and Kandahar markets will source eggs based on the current purchase price, transportation costs, and availability before placing orders in either Pakistan or Iran.

There are three to five active table egg importers that specialize (their only business activity) in each of the major provincial centers. There are also four to six egg importers in these provincial centers that import eggs along with a variety of other wholesale food items. The larger egg importers/wholesalers in Kabul, Kandahar, and Herat, specialize in egg imports as their primary business. The importation and wholesaling of table eggs in the Northern provinces is not specialized.

C3. Table egg import operations

The way in which table egg importers operate their risky businesses (perishable commodity) with limited working capital, bumpy roads that cause up to 15% broken eggs, informal and formal road blocks, poor storage facilities, and no commercial financial institutions is an impressive act of business survival. On top of these supply side conditions they have adapted to the demand side conditions that require effective relationships with retailers in order to move products through to the consumer who has very limited purchasing power and no refrigeration, thus buying only a few eggs at a time. How these business operations have evolved over time is a fascinating study in human effort, relationships, and sheer determination.

Licensing procedures and taxation.

- Importers obtain proforma documents from the Chamber of Commerce in Kabul that establishes expected imports for the coming year.
- The Chamber of Commerce then issues a license for the terms of the proforma.
- A commission charge for the license of \$2,600 is paid upfront and is good for one year.
- The proforma and license documents are used for border crossings from Pakistan and Iran by the transport companies.
- Taxes of 2.5% are paid on the total imports at the end of the year.
- Pakistan customs office charge \$70 export tax on a truck load of eggs.
- Custom house near Jalalabad charges \$400 per truck load of eggs.
- Illegal truck stops charge \$50-\$100 per stop.
- The Iranian government offers a discount to egg exporters as a way of facilitating exports.

Ordering and delivery from Pakistan or Iran.

- Importers telephone directly to table egg farmers in Pakistan to place orders.
- If eggs are not available at a given farm then they usually contact traders in Pakistan to fill their orders.
- Most Afghan importers have long-standing (over 10 years) business relations with these farms and traders. The relationships began with importing of live chickens and eggs from acquaintances of Afghan refugees living in Pakistan.
- The price of eggs in Pakistan is set daily by a committee and is based on supply and demand conditions, so farm gate prices are generally known in advance.
- Kabul egg importers use 70% Pakistan truckers and 30% Afghan truckers
- In the case of table egg imports from Iran, importers telephone orders directly to egg farmers in Iran. There are Iranian table egg farms relatively near the Afghan border and the importers in Herat have a direct working relationship with these farms. Some are actually sales representatives in Herat for the Iranian table egg farms.
- Table eggs from Iran are sold in 180 eggs per case and by weight. A case usually weighs between 9.5 and 11 kilograms (average 57 grams per egg).
- The purchase price Iranian eggs can vary from a low of 1.73 Afs per egg during summer months to a high of 2.70 Afs per egg during winter months.
- High transport costs (an extra \$1.5 to \$2.0 per case of 180 eggs) from Herat to Kabul limit the amount of Iranian eggs in the Kabul market.

Finance operations.

- Because of the long-standing business relationships between the Pakistan egg marketers and the Afghan egg importers, importers often receive eggs on credit and extend credit to the retailers that purchase regularly from them.
- Importers/wholesalers use the Kabul money market hawala system to settle their debts. The *hawala* system, is an informal financial system that is efficient, low-cost, and unregulated. An importer in Kabul goes to an agent (hawaladars) in the Kabul money market and asks for the transfer of funds. Through a centralized record-keeping system the Kabul money market, the funds are transferred to an agent in Pakistan and given to the table egg farmer at the remote location. In addition to economic factors, kinship, ethnic ties, and personal relations between hawaladars and traders make this system convenient and easy to use. Thus, a system based on national, ethnic, and village solidarity depends more on absolute trust between the participants than on legal documents.

Constraints.

Table egg importers/wholesalers identified the following constraints on their business:

- Border/traffic police exhorting bribes along the road.
- Insufficient cold storage space.
- No means of quality control of product at the farm level.
- Avian influenza scare in Pakistan that rapidly closed the Afghan border to egg imports and reduced consumer demand for eggs.

Relationship with retailers.

- Many table egg wholesalers have developed a close working relationship with retail shops and even semi-wholesalers (Kabul central market) that ensures a relatively efficient egg distribution system.
- These relationships, based on trust developed over time, are similar to those between the importers and hawaladars described above.
- This relationship also facilitates an almost “just in time” delivery and distribution system that responds to changes in short-term (almost weekly) consumer demand.

C4. Price structure

Price information collected through interviews with importers/wholesalers in the major market centers of Afghanistan indicates relative wholesale price stability throughout the country, with the exception of Herat. Herat city is an anomaly due to the fact that the local government sets and controls market prices for eggs and other agricultural products.

The US average table egg wholesale buy price in 2002 was \$0.421 per dozen and \$0.589 per dozen in 2003. Given the US economies of scale of production, low feed costs, and the low cost of capital, the wholesale buy prices from Pakistan and Iran seem to be competitive in terms of world market prices. However, it is known that the Iranian government provides a tax break for table egg exports, and it is possible that the Pakistan and Iranian producers are selling smaller and poorer quality eggs into the Afghanistan market, thus contributing to the competitive buy price.

Wholesale margins seem reasonable given the risks involved with importing eggs. If the average importer imports 10 million eggs a year or 69,445 dozen a month, then their gross margin would be about \$9,722 per month on \$52,778 in sales (18.4%).

Table 4. Estimated wholesale table egg price structure (averages do not include Herat).

\$/Dozen	Avg.	Kabul	Jalalabad	Kunduz	Mazar	Herat*
Buy	\$0.62	\$0.61	\$0.65	\$0.62	\$0.60	\$0.425
Sell	\$0.76	\$0.71	\$0.83	\$0.75	\$0.73	\$0.44
Margin	\$0.14	\$0.10	\$0.18	\$0.13	\$0.13	\$0.015

D. Retail - table eggs

This section summarizes the process of retailing table eggs, characterizes the current market situation, and defines the current retail price structure in terms of prices and gross margins for table egg retailers.

D1. Overview

Table eggs can be purchased almost everywhere in Afghanistan and at any time. The retailing of table eggs occurs at the home (for neighbors), in local periodic markets, peri-urban and urban markets, retail shops, and on the streets. Table eggs are sold by retailers by the flat (30 eggs), in a plastic bag of 4 -10, or sold one at a time. Some street vendors sell hard boiled eggs that are usually died red to indicate that they have been boiled.

Table eggs are an excellent “street food” in urban areas for workers and families on the run. A low unit price, knowledge of the nutritional value, and no cultural taboos makes this food product an easy purchase for consumers.

D2. Table egg retailers

The retailing of locally produced table eggs starts at the household where women sell to neighbors or village table egg assemblers those eggs produced in the home and not consumed by the family. Young boys will also retail eggs produced by the family in rural periodic markets and peri-urban markets depending upon distances and the cost of transportation.

The distribution and sales of imported table eggs throughout the urban and peri-urban areas is a rather efficient system. Urban based wholesalers have not only developed the marketing channels for importing large quantities of table eggs, they have also developed distribution channels with retail shops and street vendors that move product to literally every urban neighborhood.

Characteristics of the urban table egg retailers (based on survey findings):

- The central market in Kabul has four or five semi-commercial table egg vendors who purchase eggs from wholesalers and sell by the carton (180 or 360 eggs) to large shop keepers, restaurants owners, and retailers who travel from outside Kabul.
- Shop keepers retail the largest volume of both imported and local table eggs. These general merchandise shops will often display flats of eggs along with their fresh fruit and vegetables in the front of the shop.
- Of the twenty shop keepers interviewed in Kabul city, retail sales volumes ranged from a low of 100 eggs per week, to a high of 3,500 eggs per week, and with an average of 1,108 eggs sold per week.
- Kabul retailers reported the average customer buys 5 to 10 eggs at a time.
- Consumers prefer local eggs over imported eggs and will pay a premium for local eggs. One reason given for this preference is the belief that local eggs have a higher protein content than imported eggs and are thus healthier. Freshness must also be a factor.
- All table egg retailers are men
- Shop keepers claim that the table eggs from Iran arrive cleaner and with better packaging than the eggs received from Pakistan.

D3. Table egg retail system

- Shop keepers in Kabul reported that they work with one importer/wholesaler on an almost exclusive basis.
- Shop keepers reported that 47% receive eggs on credit, 41% pay cash, and 12% pay cash sometimes and sometimes receive on credit.
- 88% of the shop keepers reported that they pickup the eggs at the wholesale location, usually once or twice a week, and 12% said that the wholesalers delivered eggs to the store.

D4. Price structure

The following information on retail table egg prices was collected using a survey instrument in each of the provincial cities listed in the table below. The reader should note that the average reported retail buy price for imported eggs was often different than the average wholesale sell price, probably due to the sampling mix of large and small retailers. The information collected does describe a general retail price structure in each provincial center and the corresponding gross margins for the retailers.

Highlights from the Kabul retail survey include:

- The average retail price for local eggs in Kabul was 5.22 Afs and the average retail price for imported eggs in the same retail shop was 3.35 Afs. The premium for local eggs in the Kabul retail market was therefore 64% higher than imported eggs at the time of the survey.
- Retailers have a higher gross margin on the sales of local table eggs (0.91 Afs) than on the sale of imported table eggs (0.521 Afs). This is probably due to both the larger sales volume of imported eggs and the availability of local eggs.
- Retailers reported that they sell about 12% local eggs and 88% imported eggs.
- Kabul retailers on average earn \$0.13 per dozen eggs sold. If the average retailer sells 1,108 eggs per week (92.33 dozen) then their weekly gross margin would \$12.00 or 576 Afs.
- The estimated gross margin for retail sales of eggs in Herat (\$0.16) was higher because of the controlled prices by the municipal government that sets the retail price for eggs sold in shops.

Table 5. Estimated imported table egg retail price structure and gross margins.

\$/dozen	Avg.	Kabul	Jalalabad	Kunduz	Mazar	Herat
Buy	\$0.69	\$0.71	\$0.88	\$0.75	\$0.63	\$0.47
Sell	\$0.83	\$0.84	\$1.05	\$0.88	\$0.75	\$0.63
Margin	\$0.14	\$0.13	\$0.17	\$0.13	\$0.12	\$0.16

E. Wholesale - frozen chicken meat

This section summarizes the process of importing and wholesaling frozen chicken meat into Afghanistan. Quantity and price information was collected from the major importers/wholesalers in Kabul, Herat, Mazar, and Kandahar. Information from Kandahar poultry marketers was supplied by the FAO.

E1. Overview

Information derived from interviews with frozen chicken meat importers in the major provincial centers of Afghanistan indicate an estimated rate of nearly 50,000 tons (Table 6) of frozen chicken meat imported per year. Estimates on imports received were for the last three quarters of 2003 and the first quarter of 2004. The 2004 year end total frozen meat imports will be affected by the avian influenza scare in Pakistan. The GOA did not restrict imports on frozen chicken meat, but consumer fear of contaminated meat provoked a significant decline in demand for chicken for over a two month period.

The nation wide value of frozen chicken meat imports was derived from import volumes and average wholesale and retail prices to be about \$73 million at the wholesale level and \$78 million at the retail level. The retail value is about \$20 million more than the value of the national live chicken flock and represents a significant market opportunity for poultry meat products in Afghanistan.

Table 6. Estimated imports of frozen chicken meat with wholesale and retail values.

Totals per year	Total	Kabul	Mazar	Herat
Imports, MT	49,732	23,244	17,424	9,064
Wholesale Value, \$	~\$72,608,000	~\$32,542,000	~\$25,788,000	\$12,508,000
Retail Value, \$	~\$78,359,000	~\$36,028,000	~\$29,098,000	\$13,233,000

Importers/wholesalers reported continued growth in demand for frozen chicken meat over the previous two years and some are currently investing in cold storage space and freezer containers to respond to the increasing demand.

E2. Frozen chicken meat importers/wholesalers

The city of Herat is the major gateway for frozen poultry meat imports into Afghanistan and at least five cold storage facilities (150 to 200 ton capacity) have been built in recent years. There are reportedly 15 to 20 active frozen chicken meat importers/wholesalers in Herat, which is about double the number in Kabul and triple the number in Mazar and Khandahar. These importers/wholesalers work closely with distribution agents in neighboring provinces and market

centers along the main road to Kandahar. Some of the Herat importers are actually Kabul-based companies with representatives in Herat.

Herat is a special case in Afghanistan because some food prices and market activities are controlled by the provincial government. For example, wholesale and retail prices for table eggs and frozen chicken meat are determined by joint committee and favor the retailers in terms of allowable gross margins. The selling of frozen chicken meat by street vendors is not permitted. Also, the municipal government allows shop owners retailing frozen meat in Herat to have higher margins on frozen meat than the wholesalers in order to cover the costs of small freezers in their stores.

E3. Frozen chicken meat import operations

Sourcing and delivery system.

- There are two major sources of frozen chicken meat for Afghanistan. Bulk (15 kilogram boxes) of leg quarters from the US, and whole chickens (900, 1,000, and 1,100 grams chickens) from Brazil. There are also some imported frozen chicken (whole birds) from Turkey and Iran, but the amount imported from these locations depends on price and availability of product from the US and Brazil. Iranian frozen chicken is about \$250 per ton more expensive than US or Brazilian frozen chicken.
- The usual mix of imports is 75-80% leg quarters and 20-25% whole chickens.
- Whole chickens are usually purchased by restaurants, sometimes the military and upscale retailers, and individuals for weddings.
- Importers work through trade agents in Dubai and Turkey with considerable competition between these two groups of brokers for market share in Afghanistan.
- The importers had preferred the Dubai brokers, however, in recent months the Turkish brokers have established freezer storage space on the Iranian side of the Afghan border, have placed brokers in Herat city, and have accelerated significantly the delivery time to Herat. The Turkish brokers will also provide preferred wholesalers with credit, receiving final payment (in dollars) in a matter of days or up to a week.
- Freezer containers from Dubai (20 and 40 ft) enter Iran at Bandar Abbas and are trucked to Eslam Qaleh on the Afghanistan side of the border near Herat. Transaction time from Dubai can take 40 to 45 days from order placement to delivery in Herat, whereas the Turkish broker with frozen chicken inventory on the Iranian border can deliver product in 3 to 4 days.
- The cost of transportation from Dubai to Herat for 20 tons of product is currently about \$3,200 and includes taxes and insurance costs. This adds \$160 per ton to the total cost imported frozen chicken meat.
- The estimated 9,064 tons of frozen chicken imports into Herat are divided into 2,091 tons for Herat province and 6,972 tons for neighboring provinces. Also, the importers in Herat send an estimated 2,556 tons to the Kabul market for distribution.
- Frozen chicken quarters are distributed by the wholesalers through an extensive network of shop owners, street vendors, and agents.

Kabul importers/wholesalers notes.

- Kabul-based importers reported that total transportation costs from Herat to Kabul are about \$1,500 to \$2,000 per truck (2 days to go and 3 days to return).
- Forty foot freezer containers hold 1,500 cartons (22.5 tons) and 20 foot containers hold 1,100 cartons (16.5 tons).
- There is one frozen chicken meat importer/wholesaler in Kabul that has 250 tons storage capacity. All other importers use their freezer containers for storage.
- Illegal taxes on the road to Kabul can total \$50 – 75.
- Truck rentals can cost 70 Afs per carton (\$0.10 per kilogram or \$100 per ton).

Finance.

- Importers in Kabul, Herat, and Mazar will provide preferred retail shop clients frozen chicken on a credit basis. Payment in local currency is usually collected twice a week.
- Wholesalers make payment through the hawala system in dollars or directly through trade partners in Dubai or Turkey.

Constraints.

Frozen chicken meat importers/wholesalers identified the following constraints on their business:

- Lack of coordination from the government side.
- Border/traffic police extorting bribes along the road.
- Insufficient large capacity (1,000 tons) cold storage space.
- The need for diagnostic laboratories for poultry diseases, before they will invest in poultry production.

Working relationship with retailers.

- One creative Mazar wholesaler has provided about 25 street retailers with small freezers that hold 4 or 5 cartons. The street retailers replenish their stock from the wholesaler as they sell the inventory. These 25 retailers can sell during normal market times 10 cartons each per day or 3.75 tons per day. The retailers purchased a small generator and hired a night watchman to look after the freezers.

E4. Price structure

The following observations can be made regarding the price structure of frozen chicken meat in Afghanistan:

- US export price of bulk frozen leg quarters was about \$880 per ton
- Wholesale buy price in Dubai or Turkey was about \$1,075 per ton
- Wholesale price delivered Herat was about \$1,350
- Wholesale sell price in Kabul was about \$1,400

The ability to purchase and transport frozen meat from the US to Kabul wholesale stores for \$520 per ton is quite remarkable, given the risks involved. The ability to wholesale frozen

chicken meat in Kabul for \$1.40 a kg or 67.2 Afs per kilogram (retail \$1.58 or 75.8 Afs) is by far the cheapest unprocessed meat available in Afghanistan. Typical retail prices for a kilogram of beef are \$2.81 or 135 Afs; buffalo \$2.82 or 130 Afs; sheep \$3.85 or 185 Afs; and live chickens \$3.21 or 154 Afs.

The average wholesale gross margins of \$0.18 per kilogram (8.64 Afs) of frozen chicken meat seems reasonable given the risks involved and the costs of transporting and storing frozen product. If the average importer/wholesaler imports 150 tons per month (150,000 kilograms) they would have a gross margin on their services of \$27,000 or 12.3% of \$219,000 in sales. As with the table egg industry, these gross margins are reasonable given the risks involved.

Table 7. Estimated wholesale price structure and margins for frozen chicken meat.

\$/kg	Avg.	Kabul	Mazar	Kandahar	Herat
Buy	\$1.28	\$1.08	\$1.29	\$1.40	\$1.35
Sell	\$1.46	\$1.40	\$1.48	\$1.52	\$1.38
Margin	\$0.18	\$0.33	\$0.19	\$0.12	\$0.03

F. Retail - frozen chicken meat

This section summarizes the process of retailing frozen chicken meat, characterizes the current market situation, and defines the current retail price structure in terms of prices and gross margins for retailers of frozen chicken meat.

F1. Overview

Imported frozen chicken meat is a relatively new commodity for Afghanistan and its acceptance has been growing over the last two years because of its competitive price relative to other meats sold in the marketplace. In general terms retail sales of most meat products takes place at road-side butcher shops. These “shops” are nothing more than a wooden stand, a few meat hooks, and a scale. Cattle, sheep, and goats are walked to these “shops” and slaughtered on site according to the halal religious procedures. The whole carcass or quarters are hung on the hooks and consumers venture by to purchase a few kilograms at a time. There is no refrigeration and the hygienic situation is as poor as it possibly could be.

Frozen chicken meat retailers reported that consumers prefer live chickens to frozen chicken for several reasons. First, consumers don’t have refrigeration and must eat the frozen chicken the day it is purchase, whereas a live chicken can run in the yard for a few days before slaughter. Secondly, consumers don’t have confidence in the way the imported chicken may have been slaughtered (must be according to halal procedures).

Consumption of frozen chicken leg quarters has increased every year for the last few years because of the competitive price. Some retailers reported that frozen leg quarters are viewed by

some consumers as the poor man's meat. The order of preference for meat in Afghanistan is sheep, goat, beef, water buffalo, and lastly frozen chicken meat.

F2. Frozen chicken meat retailers

Frozen chicken meat retailers are based largely in urban and peri-urban areas due to the need to keep the chicken meat frozen.

Attributes of frozen chicken retailers include the following:

- They are independent vendors that specialize in selling frozen chicken meat.
- They have limited working capital and usually purchase only the quantity of 15 kilogram cartons they believe they can sell in the course of a day.
- Retailers will often receive their daily inventory on credit and will pay their wholesale suppliers once or twice during the week
- Some retail shop owners will sell frozen chicken meat if they have a small freezer for storage.
- The larger butcher shops in Kabul, Herat, and Mazar have freezers and retail cartons of frozen chicken meat to larger customers such as restaurants, military, hospitals, and wedding halls.

F3. Frozen chicken meat retail operations

The following describes how the frozen chicken meat retail vendors operate in the major provincial market centers.

- 85% of the frozen meat retailers reported that they purchase cartons of frozen meat from the same wholesalers on a regular basis.
- In Kabul, frozen chicken meat retailers arrange transportation 43% of the time to pickup cartons of frozen chicken meat on a daily or every other day basis, whereas 50% of the retailers stated that wholesalers deliver cartons on a daily basis and 12% stated sometimes they pickup and sometimes the frozen meat is delivered.

Finance.

- 57% of the frozen chicken meat retailers in Kabul reported that they receive their frozen meat from wholesalers on credit and 43% pay cash.
- Retailers repay their wholesaler debts on an almost daily basis because the wholesalers have the primary freezer storage and the retailers return for supplies.
- Wholesalers accept payment from retailers in local currency, although they have to import on a dollar basis, and thus take any exchange rate risk.

Constraints.

- Frozen chicken meat retailers would expand sales if affordable financing for small freezers was available
- Demand for imported frozen chicken meat was greatly reduced because of the avian influenza stories that appeared in the local media.

- Distribution networks beyond the major provincial centers have not developed in Afghanistan because of high transportation costs, informal road taxes, and a lack of cold storage facilities.

F4. Price structure

The retail price for a kilogram of frozen chicken leg quarters was surprisingly similar in the different provincial cities surveyed. Retail prices were expected to vary according to distance from the primary provincial wholesale markets because these distant points of sale have higher transportation costs.

The following observations can be made regarding the price structure of frozen chicken meat in Afghanistan:

- US export price of bulk frozen leg quarters was \$880 per ton
- Wholesale buy price in Dubai or Turkey was \$1,075 per ton
- Wholesale price delivered Herat was \$1,350
- Wholesale sell price in Kabul was \$1,425
- The average retail price in Afghanistan was \$1,580 per ton (\$1.58 per kilogram)

An example of frozen chicken meat retail gross margins:

- The estimated frozen meat retail gross margin in Kabul was \$0.15 per kilogram.
- Estimated sales volumes in Kabul were from 90 kilograms to 1,200 kilograms per week with average sales volumes of about 270 kilograms per week. If a retailer sells three cartons per day (45 kilograms) for six days per week, this equals 270 kilograms per week.
- If the average vendor sells 270 kilograms, then the gross margins would be \$40.50 per week (1,944 Afs) or \$162 per month (7,776). Most retailers have little in the way of costs, usually just for transportation.

Table 8. Estimated retail price structure and margins for frozen chicken meat.

\$/kg	Avg.	Kabul	Kandahar	Kunduz	Mazar	Herat
Buy	\$1.44	\$1.40	\$1.52	\$1.46	\$1.48	\$1.37
Sell	\$1.58	\$1.55	\$1.67	\$1.56	\$1.67	\$1.46
Margin	\$0.14	\$0.15	\$0.15	\$0.10	\$0.19	\$0.09

G. Live poultry

This section summarizes the market participants, activities, characteristics, and opportunities for development in live poultry markets.

G1. Overview

Afghanistan has a long tradition of utilizing live poultry markets. In fact the famous Chicken Street in Kabul is so named because it was historically the primary live chicken market for the city. There are three active groups of live poultry marketers in such markets today, the assemblers, wholesalers, and retailers. Live chickens are imported from Pakistan for Jalalabad, Kabul, and Kandahar essentially for live markets within no more than a days drive due to mortality risks. The quantity and regularity of imported broiler type chickens can affect the price for live local chickens. However, the consumer still prefers, and is willing to pay a premium for, live local chickens.

Live poultry village assemblers. The live poultry assemblers are usually village-based men and sometimes women who assemble live poultry, either directly from village households or during periodic market days that are held in the larger villages. These assemblers will purchase for resale, chickens, ducks, geese, and turkeys. They arrange transport to urban live poultry markets and either sell the birds to retailers or directly to consumers on the roadside near the live poultry market.

Live poultry importers/wholesalers. The live poultry importers/wholesalers are usually urban based men in Jalalabad, Kabul, Kandahar, and Herat, who purchase truck loads of live chickens in either Pakistan or Iran for resale in the provincial market centers. The operational process used in Jalalabad, perhaps the most active live bird market for imported broiler type chickens from Pakistan, includes the following:

- Importers contact farms or traders in Pakistan and arrange for truck shipments of chickens from Peshawar to Jalalabad.
- Typical truck has cages that hold 1,000 to 1,500 chickens (usually white feathered broilers).
- Mortality runs less than 1% for the short 4-5 hour drive.
- Body weight shrinkage runs about 6-8%.
- Transport costs run about \$140 per truck.
- Purchase price is about \$0.79 per kilogram.
- Some wholesalers will receive live chickens from Pakistan on credit and will repay their debt when the truck load of birds is sold. Other wholesalers will make a cash payment to the truck driver when the chickens arrive in Jalalabad.

Live poultry retailers. The live poultry retailers have established businesses in the provincial centers' live poultry markets. These retailers source their birds from villagers who transport them to the marketplace and sell for cash and/or have urban-based agents that assemble live poultry in the villages and/or purchase from village-based poultry assemblers and/or are importers of live poultry from Pakistan and Iran. The operational process used in Jalalabad includes the following:

- The Jalalabad live poultry market has 107 retailers (some of whom are importers).
- Imports could run as high as 20 trucks a day.
- Retail sales price is about \$1.14 per kilogram for live broiler type chickens.
- Live imported broilers weighing 1.5 kgs sell for \$1.71, about half the price of a local village chicken.
- Gross profit per truck of 1,000 broiler chickens is about \$500.
- Importers either sell the chickens to retailers or retail the chickens themselves.

G2. Live poultry markets

Marketplaces for live poultry are notorious for the spread of poultry diseases which leads to significant economic losses and presents a potential public health hazard. The spread of disease through such marketplaces can be controlled through the use of improved cage systems, an organized marketplace structure, and regular disinfection activities.

The live poultry market in Kabul (Picture 4) is typical of live poultry markets throughout Afghanistan. The current situation in each of the live poultry markets visited during the assessment can be characterized as follows:



- Chickens, turkeys, ducks, geese, guinea fowl, and partridge of different ages are kept in cages on the side of a road near the central markets.
- The designated poultry marketplace may or may not be officially designated by the municipality.
- Cages are either steel-framed with wire mesh siding or wooden-framed with wood strip siding.
- Water and whole grains are placed in the cages each day. It is very doubtful that the amount of grain provided is adequate to maintain body weight.
- Cages are not cleaned on a regular basis, and when they are cleaned, disinfectants are not used. Considerable manure buildup on the cages is evident.
- Visibly sick and even dying birds can be seen in each market, reflecting the practice where villagers try to sell their sick birds before they die.
- There is general recognition by the live poultry retailers that sick birds are in the market, and there is a feeble attempt to cull and destroy the sickest birds in their possession. Unfortunately, culled birds are often just dumped on the ground near the live birds until the end of the market day.
- Poultry market retailers will take the cages at the end of the market day to a secure room for storage. These rooms are usually general merchandise shops and the cages are placed on the floor with grain and water. Some shops are actually live fancy bird shops (parakeets, canaries, etc.) where the likelihood of spreading avian diseases is increased even further.

H. Recommendations for poultry sub-sector development

This section lists opportunities and the primary recommendations for a national poultry improvement program, provides a rationale for the development focus, and defines some of the potential benefits from such a program.

The following recommendations are made on a provincial basis that is to say that all the recommendations would be implemented in full, in each proposed province. In order to have national impact it is suggested that activities be implemented in no less than 10 provinces.

H1. Opportunities

Clearly, there is a significant business opportunity in Afghanistan to capture a share of the table egg and chicken meat markets. The following list of opportunities is derived from the assessment findings and provides general direction for an Afghanistan poultry improvement program.

- Capturing a share of the expanding table egg market with the production of brown eggs (local eggs are brown relative to imported white eggs).
- Utilizing dual purpose breeds for table eggs and spent hens for live bird markets.
- Developing feed milling enterprises to supply the growing number of poultry producers.
- Developing hatchery enterprises to meet the demand for day-old chicks and replacement pullets.
- Developing breeder enterprises to meet the demand for fertile eggs.
- Improving live poultry markets in order to reduce the spread of avian diseases.

H2. Recommendations

This section defines three pillars of development support that must underpin the recommendations made herein, if entrepreneurs and their poultry enterprises are to compete with egg and meat imports on a profitable basis.

The three pillars required to support a poultry improvement program are:

- 1) Appropriate technology must be found and used in the production process (e.g., buildings, equipment, breeds, feed ingredients, and medications).
- 2) Training and education in poultry production and enterprise management practices must be made available to all interested investors.
- 3) Finance must be available for initial capital investments and over time to meet working capital needs.

Recommendation #1. Design and develop demonstration poultry production enterprises on a model farm in collaboration with the Ministry of Agriculture and Animal Husbandry (MAAH) in each of the proposed provinces.

The objectives of this recommendation are to:

- 1) Develop a clear and close working relationship with the MAAH on this important development activity
- 2) Make appropriate technology used at the model farm available to the general public to view and gain understanding of the required production practices
- 3) Provide potential investors who appreciate the business opportunities demonstrated at the model farm with adequate information for them to make an informed investment decision.

The model farm demonstration site should include:

- Model production enterprises (e.g., table eggs, fertile eggs, and replacement pullets) that utilize appropriate technology and have been determined to be profitable. The model enterprises would be scaled for semi-commercial producers.
- Poultry extension office that would provide potential investors with the opportunity to see the enterprises in full operation and access technical and financial information about the enterprises.
 - Information products should include technical fact sheets, poultry production and management bulletins, and enterprise promotion packets.
 - Formal demonstration days should be held on a regular basis and promoted through the media.
 - Extension staff should be available on a daily basis in order to oversee production staff and ensure visitors are able to view the facilities and access information.
- Trained extension staff from the MAAH should be available on-site to potential investors. The extension office should be financed from proceeds from the model enterprises, including salaries and the production and printing of all extension materials.

Recommendation #2. Design and implement a series of poultry production and enterprise management courses.

- Poultry production and enterprise management courses should be developed and made available on a regular basis in the provincial centers where the model farms would be established.
- The courses should issue a certificate of completion that is recognized by the MAAH.
- The courses should be implemented by a private sector company trained by the project.

- Entrepreneurs interested in investing in one or more of the model production enterprises must be required to finish a certified course before they could access finance from a RAMP-related finance project.

Recommendation #3. Design and develop poultry enterprise business plans that include financial statements that can be used for accessing finance and for enterprise management.

- Develop comprehensive business plans that can be used as a bridging tool between the investors and financial institutions.
 - The business plans should provide clear technical milestones for the implementation and operations of the enterprise.
 - Investors should be able to define in quantitative terms the marketable production output of the enterprise, cash flow, and the ability to repay debt.
 - Financial institution managers should be able to interpret operational plans that are updated monthly and evaluate the ability of the investor to meet financial obligations.
- Business plan development will focus on semi-commercial production enterprises:
 - Table egg producers
 - Fertile egg producers
 - Replacement pullet producers
- Develop commercial feed milling enterprise business plans
- Develop commercial hatchery enterprise business plans

Recommendation #4. Work closely with municipal governments in each proposed province on the improvement of live poultry marketplaces.

- Market places should be designed and constructed to facilitate cleaning and disinfection of the facilities on a regular basis
- Cages for live poultry should be designed for easy cleaning, use, and made available to the live poultry marketers

Recommendation #5. Provide technical assistance to existing and potential commercial poultry production investors.

- The poultry improvement project should provide technical assistance to those entrepreneurs who have the management experience and financial resources to develop commercial poultry enterprises.

- Technical assistance should be in group or workshop format. For example, workshops on feed mill, hatchery, brooder house, and breeder management could be conducted in targeted provinces on a regular basis.
- Technical assistance should also be on a direct business basis on such confidential matters as financial management.

Recommendation #6. Integrate veterinary services supported by RAMP with the poultry development program.

- The RAMP supported livestock health, production, and marketing project implemented by the DCA must provide poultry vaccination and medication services to poultry producers.
- Joint workshops and extension information focusing on poultry disease prevention and management, vaccination program guidelines, and poultry health issues should be designed and implemented.

Recommendation #7. Ensure enterprise coordination within each provincial poultry improvement program

- Enterprise development in each province should be monitored and evaluated to ensure business success of the individual enterprises. For example, a feed mill enterprise may not have adequate demand for feed before the poultry producers build their flocks to a critical size and may have to grind wheat flour in order to maintain adequate cash flow to repay debt.
- Project implementers should work closely with the financial institutions to evaluate technical issues that may arise in enterprises within their portfolios and provide guidance on the potential financial consequences that may evolve from these technical issues.

H3. Rationale

- Focusing poultry development activities on semi-commercial producers will contribute to the RAMP objective of broad-based income generation whereas a focus on commercial production would not achieve the level of income generation desired.
- The consumer in Afghanistan prefers and is willing to pay a premium for live chickens and local table eggs.
- As the number of semi-commercial producers increases the demand for quality feed, fertile eggs for the hatchery enterprises, and replacement pullets for new table egg producers, will expand proportionately.
- Capturing existing market share of the table egg and live bird markets is a medium-term objective that will ensure-broad based development of semi-commercial producers.

H4. Potential benefits

Assuming development activities in 10 provinces:

- Each province could have 20 table egg production farms with 6,000 layers, producing 27 million table eggs per year; 10 provinces would produce 270 million eggs per year.
 - The estimated value of 270 million table eggs at current retail prices is \$18,675,000
- Each province could have 4 breeder farms with 4,000 breeders, producing 2.59 million fertile eggs per year; 10 provinces would produce 25.9 million fertile eggs per year.
 - The estimated value of 25.9 million fertile eggs is \$2,697,000
- Each province could have 4 pullet rearing farms, producing 36,000 replacement pullets per year; 10 provinces would produce 360,000 replacement pullets per year.
 - The estimated value of 360,000 replacement pullets is \$1,080,000
- Each province could have one feed milling enterprise producing 2,600 tons of improved feed per year; 10 provinces would produce 26,000 tons of feed per year.
 - The estimated value of 26,000 tons of feed is \$5,200,000
- Each province could have one chicken hatchery enterprise producing 288,000 day-old chicks per year; 10 provinces would produce 2.88 million chicks per year.
 - The estimated value of 2.88 million day-old chicks is \$345,600

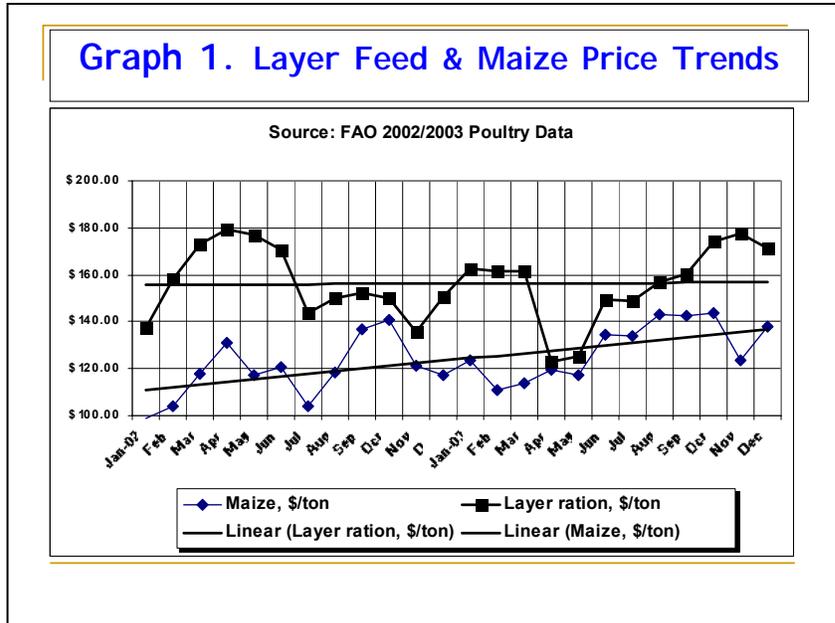
Other benefits:

- Comprehensive poultry production and management training programs established in each province.
- At least 225 poultry enterprises (75% of the expected 300) access finance for making the initial capital investment and working capital.
- Each provincial center has a functioning live poultry marketplace that reduces significantly the spread of avian diseases.

ANNEX A. Market prices

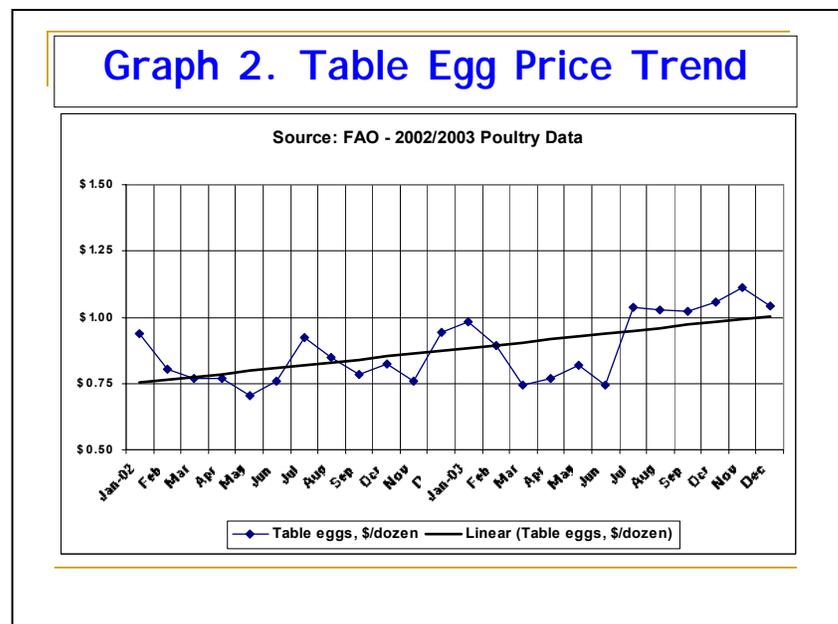
Graph 1. Layer feed and maize price trends over 2002 – 2003.

The linear price trend for a layer feed ration in Kabul over the 2002 – 2003 period was essentially stable around \$159 per ton. However, the graph also illustrates considerable seasonal price volatility during the period. The trend for corn prices over the same period was upward from \$110 per ton in early 2002 to \$139 per ton by the end of 2003. Poultry producers around the world track maize prices relative to feed prices because maize is usually a major component of the feed ration. Upward movement in maize prices will signal a corresponding increase in feed prices and then, meat and egg prices. Maintaining relatively stable feed prices under \$200 per ton will be important for the profitability of any semi-commercial and commercial poultry enterprises in Afghanistan.



Graph 2. Table egg price trends over 2002 – 2003.

The price trend for table eggs in Kabul over the 2002-2003 period was positive, rising from \$0.75 per dozen in January 2002 to \$1.00 per dozen by December 2003. The seasonality of table egg prices can be seen rising in winter months and falling in the spring and summer months. The rise in the summer months of 2003 could be due to overall growing demand for table eggs in Kabul city. The overall positive price trend for table eggs, with relatively stable feed prices, indicates a significant business opportunity for table egg producers in Afghanistan.



Graph 3. Live bird price trends over 2002 – 2003.

The positive growth trend for both young layers and spent hens in the live poultry markets is significant. The price per young layer in January 2002 was about \$2.00 per live bird and this price increased to \$3.25 per bird by December 2003, an increase of \$1.25 or a 62% increase in price. The price per spent hen rose from \$1.80 in December 2002 to \$3.50 by the end of November 2003, an increase of \$1.70 per spent hen.

It is also interesting to note that the average price for a young layer was always higher than the average price of a larger spent hen. This would indicate that the demand for young layers is not for consumption purposes but for production of table eggs. The positive and significant upwards price trend for live chickens reflects a real and growing business opportunity for poultry producers in Afghanistan.

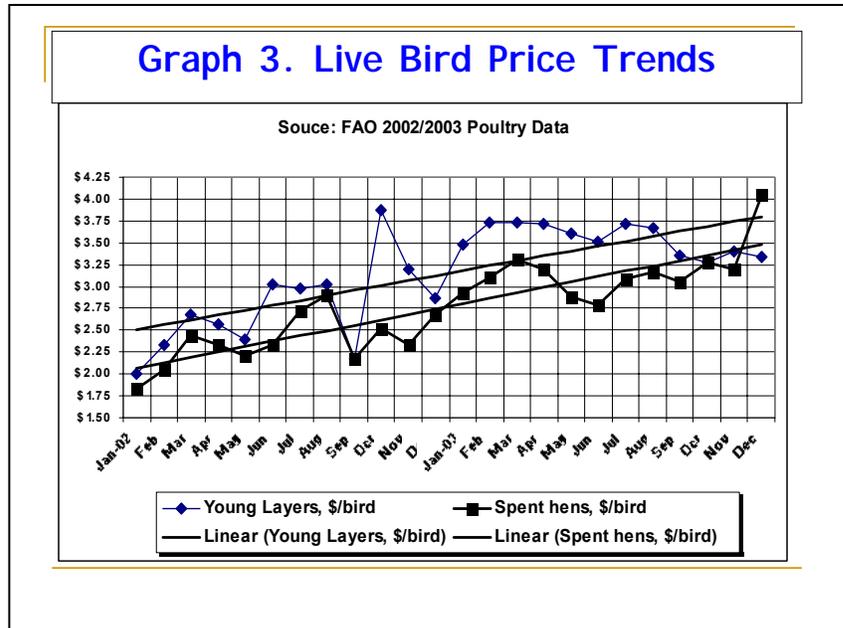


Chart 5. Frozen meat margins in the value chain in three urban centers.

Estimates of gross margins earned by foreign export brokers, importer/wholesalers, and retailers operating in the frozen chicken meat value chain, are presented in Chart 5.

Marketing Margins	Kabul		Mazar		Herat	
	Price	Margin	Price	Margin	Price	Margin
Frozen Meat						
US price, \$/Kg	\$0.88		\$0.88		\$0.88	
		\$0.20		\$0.41		\$0.47
Border price, \$/Kg	\$1.08		\$1.29		\$1.35	
		\$0.33		\$0.19		\$0.02
Wholesale prices, \$/Kg	\$1.40		\$1.48		\$1.37	
		\$0.15		\$0.19		\$0.09
Retail price, \$/Kg	\$1.55		\$1.67		\$1.46	

Chart 6. Imported table egg margins along the value chain in four urban centers.

Estimates of gross margins earned by foreign export brokers, importer/wholesalers, and retailers operating in the table egg value chain, are presented in Chart 6.

Chart 6. Imported Egg Margins								
Marketing Margins	Kabul		Kunduz		Mazar		Herat	
	Price	Margin	Price	Margin	Price	Margin	Price	Margin
Imported Eggs								
Purchase price, \$/dozen	\$0.55		\$0.55		\$0.55		\$0.43	
		\$0.06		\$0.07		\$0.05		\$0.01
Border price, \$/dozen	\$0.61		\$0.62		\$0.60		\$0.44	
		\$0.10		\$0.13		\$0.03		\$0.03
Wholesale price, \$/doz	\$0.71		\$0.75		\$0.63		\$0.47	
		\$0.13		\$0.13		\$0.12		\$0.16
Retail price, \$/doz	\$0.84		\$0.88		\$0.75		\$0.63	