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Assessment and Recommendations for the Marketing  
Systems of Livestock, Meat, Poultry, Eggs and  
Dairy Products, Syrian Agricultural Sector Assess-  
ment, Volume III

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## PREFACE

An assessment of a marketing system must consider the goals and objectives of the society in which it operates. It also must recognize that most societies operate with some conflicting goals and philosophies about the economic and non-economic direction of marketing systems. The specific role of the State and private interests may change from time to time in the course of development, but marketing functions must perform effectively if the society's goals are to be achieved.

This report attempts to assess the marketing systems at the current state of development of the Syrian economy and make judgements and recommendations based on principles of the disciplines involved on experience with systems in other countries and on field work in Syria. The role of the public and private sector in these livestock and poultry industries varies a great deal among specific industries and stages within an industry. These roles have been changing in recent years and changes are still planned.

It is the objective of this study to provide the State Planning Commission of Syria and other interests with some information and recommendations that will lead to improved performance of the marketing systems.

The focus of this assessment is on the market organization, practices, policies and investments that influence the marketing system's ability to provide consumer satisfaction for marketing services, subject to the societies' desire to improve physical and economic efficiency, increase economic development and to reduce inflation.

### Acknowledgements

Several individuals gave valuable assistance to facilitate collecting necessary information. Dr. Munzer Zukari, veterinarian in charge of the Damascus slaughter plant, was helpful in collecting information on slaughter facilities in Damascus, Hama and Aleppo. He also arranged for visits to several government facilities in these regions.

Mr. Ali Youssif and Mr. Fakari in the General Consumption Institute authorized the survey of butcher shops in Damascus providing assistance in conducting the survey. Mr. Fares Khoury (MAAR) reviewed the manuscript.

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## 1. OVERVIEW OF THE MARKETING SYSTEM FOR LIVESTOCK-MEAT, POULTRY, EGGS AND DAIRY PRODUCTS

This assessment examines the available information that indicates the level of performance of the marketing system related to meat, poultry and dairy products. Specifically, it examines practices, producers, policies, productivity, costs, prices, profits and overall efficiency achieved by the marketing system in using resources to satisfy consumer demand. Evaluation and recommendations are based on the judgement of the authors as to the degree of potential performance being achieved. Empirical evidence was obtained where possible.

Production and output in the livestock and meat subsector overall has increased little in the past decade and physical output per capita has declined. On the other hand output of poultry meat and eggs has increased sharply and was approaching self-sufficiency by the Spring of 1979. The increased demand for animal protein is being met mostly by the expanded poultry industry using mainly imported feeds. It is also being met by live sheep and carcass imports in an attempt to hold down the advance in lamb and mutton prices.

The value of animal production in constant 1963 Syrian pounds was one-third the value of agricultural production in 1969 and declined to one-fourth by 1976. Growth in the poultry meat and egg industries is one of the more successful aspects of agriculture in Syria. These two industries have been able to recently adopt the modern technology, management, processing and marketing systems that have led productivity and performance in most food industries in many countries since the 1950's.

Rapid advancement in livestock, meat and dairy products has not been as easy elsewhere and it appears to be even more difficult in the Middle East where arid land and tradition dominates many of the policies and practices. Development of all of these industries depend heavily on the development of the feed industry. The Syrian government and the private sector has recently expanded the feed industry to support expansion in livestock poultry and dairy industries.

The striking point about the livestock-meat subsector in Syria is that demand has been growing rapidly while domestically produced supply has been relatively stagnant. This is generally true throughout the Middle East. Demand has been growing due to rapid growth in population and to rising income. Supply has failed to keep pace due to the arid climate and to failure to adopt modern production and marketing technology and modern management methods. Low productivity for labor and general inefficiency characterizes much of the entire subsector from production through processing and retailing. One can observe opportunities at every stage where improvement is possible and feasible from increased lamb crops to adoption of a standardized grading system and flexible pricing of meat at wholesale and retail.

Price control of meat and dairy products is being used to help hold down inflation, but it creates severe distortions and retards growth of the sub-sector. The public sector has an important responsibility and role in markets that are not commercialized to facilitate the movement of resources and firms, however, these are complex industries and poor management in the public sector can retard the performance of a marketing system by designing policies which seek to hinder the movement of resources and firms. If not prevented by restrictions, consumer demand will pull resources into the subsector to meet the growing demand.

### 1.1. Government Policies Affecting the Marketing System

There are examples of government policies designed to control either partial or whole segments of a commodity marketing system. A specific example is the policy by the Damascus Mohafaza that all sheep slaughtered and marketed in Damascus must be owned by the Meat Bureau. This policy has resulted in illegal trade of uninspected sheep being sold by the private sector to butchers, often above the government's control prices. The policy to monopolize the marketing system has caused inefficient utilization of available resources. The Damascus slaughter plant is underutilized with the government unable to purchase enough slaughter stock at prices which are within the government's retail price schedule.

Government decrees, which try to control even small portions of the marketing system, often cause distortions in the rest of the system. One example is the government's requirement that skins from all animals slaughtered in the Aleppo slaughter plant must be sold to the state-owned tanning factory. Government prices paid by the tannery are lower than prices in the private market. Producers are discouraged from using the plant and some slaughter at home instead. The slaughter plant is grossly under-utilized and operates at an economic loss.

Similar distortions in market exchanges can be documented in poultry, eggs and dairy products. In the marketing system where government has set market prices below the level at which products will be traded, resources will tend to go to the highest purchaser. In dairy marketing, dairy processing plants are unable to compete for fresh milk with the private

sector which sells milk for prices higher than government retail prices. All three government dairy plants in Syria are using only a portion of their available capacity. Economic losses again accrue to society who must pay for these losses.

#### 1.2. Legal and Economic Environment of the Marketing System

The means by which government regulates marketing activities influences how efficient the marketing system will perform. Laws or the execution of laws which are inconsistent with economics will encourage individuals to violate these laws. Although technically there is no limit to the number of export licenses, the government issues only a few export licenses for sheep to a small group of private individuals. The majority of sheep fattening operators are restricted to sell only for domestic consumption which encourages smuggling of sheep out of organized market channels. Large gains are restricted to a few fatteners who are able to organize the supplies, obtain export permits and deliver on the buyers terms.

Government, both a regulator as well as a participant in the production and marketing system, sends conflicting signals through the marketing system. Government by regulating price at all levels, except at the farm level in some cases, causes products to be produced and marketed less efficiently. If wholesale and retail prices are kept artificially low, these prices become transmitted back to producers in the form of lower prices and fewer services.

When the public sector enters a segment of the marketing system, e.g. processing poultry, and constructs a facility which has a capacity larger than any plant in the private sector, there is no incentive on the part of private, low cost plants to make long term investment in their facilities. In some cases, the government facility is operated at less than

full capacity realizing losses while the private sector is not encouraged to adopt technology which could lower their overall costs.

### 1.3. Operational and Pricing Efficiency of the Marketing System

Transportation and communication are important factors for the smooth flow, processing, and distribution of products. If products can not be handled and transported easily, costs to provide marketing services increase. The marketing of fresh milk is an example where marketing costs are high because products move in small volume. As total milk production increases over the next five to ten years, the present marketing system will have difficulty in handling this volume. An example of an efficient transportation system has been the movement of live sheep, either internally, or to external markets because it is allowed to respond to market signals.

Marketing products at the least cost given the relative demands, is achieved only when resources, human and material, are allowed to be organized most efficiently. With no controls on prices at the farm level, sheep flow to highest priced market most efficiently. In poultry and egg marketing the marketing margins from farm level to retail have been competitive and not exorbitant. Where freedom to enter a marketing system occurs, costs are kept relatively low.

In the poultry and egg subsector, prices for products fluctuate with supply and demand conditions prevailing in the market place. The number of producers, processors, middlemen, and retail outlets are sufficient to keep prices at each stage of the marketing system close to marketing costs. In March, 1979 market prices generally were below the

official government prices for poultry meat and eggs. It is relatively easy to enter the marketing system at either the wholesale or retail level. The operational and pricing efficiency for livestock products are dependent on government policies which determine how firms will operate in the marketing system.

#### 1.4. Progressiveness of the Marketing System.

Performance of a marketing system can be measured by how progressive firms are in marketing a product. Adoption of new technology is an indicator of profit incentives that encourage firms to invest in their operations to make them more efficient. Where government policies prevent these incentives from being expressed, government then often is inclined to begin to operate firms. The marketing system for livestock products in general is not that progressive. The margins of profit determined by government in some cases, like eggs, is low resulting in little incentive to provide additional services or packaging of the product. If a marketing system is progressive, this has long term effects in encouraging investment in production and delivering lower cost products to consumers.

#### 1.5. Performance Levels and Government Role in the Marketing System

Equity considerations are important in determining the level of performance of a commodity marketing system. In the export trade of live sheep, although entry is claimed to be free, a few individuals are allowed through government regulations to realize large net profits while the majority of the firms in the industry are refused (or are unable to gain) legal entry. Performance of sheep production and marketing could be improved if more individuals are allowed to share in the benefits from trade. Government's

role as a supervisor of the marketing system could be to insure the system is allowed as many as can profit to enter the business and that fraud does not give certain interests an advantage.

If firms are required to operate within guidelines which are determined to be equitable, middlemen have an important role to play in assembling products, processing, packaging and distribution of products. Profit levels can be reviewed by government to determine level of performance and the equity of this system. Losses in the dairy processing plant in Aleppo, the slaughter plant in Damascus, the wool scouring plant in Hama, and the poultry processing plant in Damascus are indications that the marketing system is not performing at an acceptable level. The justification that the public sector operates a plant to serve the needs of the consumer is partly an illusion when the consumer must ultimately pay for losses through government revenues.

The role of the public sector, as a participant in the marketing system, should be to aid or assure satisfactory delivery of products demanded by consumers. Government ownership may not be an effective way of achieving this, however, the public sector can be used as a means of protecting consumer interests and assuring competition in a narrow market. For example, in Damascus, the government controls the meat market. At the retail level, the state owned Meat Bureau operates ten meat retail shops as well as supplying the 1,200 mutton butcher shops with carcasses daily. The performance of the government shops was found to be high, with reasonable profits, clean facilities, and good services to consumers. However, they were apparently subsidized to allow them to sell at the official prices. The private mutton shops had a much lower level of performance with smaller profit returns and poorer services due to the fixed wholesale and retail

prices. It was found that government regulations were keeping performance of the private retail trade low. When government is a competitor in the market, it should be required to cover costs, otherwise private investment will be discouraged.

Since there is only one modern slaughter plant in Damascus and in Aleppo it is reasonable that they be government operated, but ways need to be found to operate them as a service to all interests in a manner that will cover costs if possible. Free government inspection may be desirable to protect the public. Inflexible prices, charges and operations do not meet the needs of an industry that faces variable costs and supplies and varying prices for its main products and by-products.

Retail butcher shops in Damascus are small and have low volume. They were generally unable to cover costs at fixed wholesale and retail prices. To stay in business, some violated the controls. Some also handled carcasses from illegal slaughter to increase volume and make a small profit. An environment for private modern retail grocery stores that also sell meat, or at least stores with a full line of meat and poultry is needed.

## 2. ASSESSMENT AND RECOMMENDATION FOR LIVESTOCK AND MEAT MARKETING IN SYRIA

### 2.1. Description of the Industry

Livestock and their by-products have an important role in the agricultural sector. Livestock provides 27% of the value of agricultural production and 4% of national gross domestic products in 1977 (Central Bureau of Statistics, 1978). The total value of livestock products increased in every year except 1974 which declined because of lagged effects from the war in 1973. In 1977, value of livestock production reached S.L. 918 million. For the period of 1975-1977, the average value of livestock products was 57% of the total value of total animal products produced during the same period (table 2.1).

Livestock production has also been an important export item including re-exports of fattened sheep (table 2.2). In 1977, the value of livestock and meat exports was 33% of the total value of food and live animals exported. The value of imported livestock and meat constituted only 2% of the total value of food and live animals imported. The livestock by-products of hides, skins, and wool exported was S.L. 87 million in 1977 which exceeded the value of livestock and meat exported.

Table 2.1. Value of Livestock Production at Current Prices, 1971-1977

	Year						
	1977	1976	1975	1974	1973	1972	1971
	(Million S.P.)						
<b>Value of Livestock Production</b>							
Livestock	858.2	708.7	604.4	392.4	459.5	178.8	210.1
Wool	57.3	159.6	46.9	48.6	28.1	34.1	31.5
Animal Hair	3.1	2.5	7.7	9.8	4.3	4.5	4.4
Total	918.6	870.8	659.0	450.8	491.9	236.4	246.0
<b>Value of Livestock Products as % of Total Animal Production<sup>a</sup>(%)</b>							
	54	60	57	52	56	43	46
<b>Value of Livestock Products as % of Total Agriculture Production (%)</b>							
	15	16	15	12	22	9	12

a. Animal production includes milk, livestock, eggs, poultry and wool and hair products.

\*\*\*\*\*

Table 2.2. Exports and Imports of Food and Live Animals in Syria, 1977.

Product	Exports		Imports	
	Value (1000 LS)	% of Total Food & Live Animals	Value (1000 LS)	% of Total Food & Live Animals
Live Animals	59,061	22	10,741	1
Meat and Meat Preparation	31,198	11	13,538	1
Total Food & Live Animals	273,281	100	1,124,339	100

Source: C.B.S., 1978.

Livestock present an important source of export earnings for economic development.

The livestock population for Syria during the period of 1971-1977 is presented in table 2.3. In 1977, there were approximately 7 million sheep which is the major source of animal protein for Syrians. Based on three year moving averages, the average annual growth rate for the period of 1971-1977 was 5.9%. Cattle and goat production are secondary enterprises with a smaller national herd size. Annual growth rates for cattle and goats were 4.5% and 8.2% respectively. Cattle are mainly kept for production of milk.

Distribution of small ruminants is variable based on the season of the year. Availability of forage is the major determining factor whether small ruminants will be grazing post-harvest stubble in the higher rainfall areas or in the steppe region. (Distribution and migration studies have been covered in detail by Boykin and Khoury). Cattle being primarily kept as a dairy herd are not moved to seasonal grazing areas. Cattle are distributed in the higher rainfall areas with over 250 mm. annual precipitation and along the Euphrates River.

Meat prices rose faster than most agricultural products in the last decade. Rising prices are attributed to the lack of growth in supply in the face of sharp growth in population and growing incomes. The increase in demand for animal protein is being met mostly by the expanded poultry production using mostly imported feed.

Table 2.3. Livestock Population<sup>a</sup> in Syria, 1971-1977

	Cattle	Sheep (000 head)	Goats
1971	506	5,456	741
1972	488	5,166	697
1973	494	4,840	608
1974	524	5,295	684
1975	557	5,809	814
1976	574	6,490	956
1977	639	7,070	1,010
Average Annual Growth Rate <sup>b</sup> (%)	4.5	5.9	8.2

<sup>a</sup>C.B.S., 1978<sup>b</sup>Based on 3 year moving average

## 2.2. Assessment of the Marketing System for Livestock and Meat

Livestock marketing in Syria can be described as being competitive with the majority of control in the hands of the private sector. The Syrian government is trying to improve its position in the marketing system by using government organizations or cooperatives.

At each stage of the marketing system there are many buyers and sellers which leads to competitive pricing for available products. Some distortions in the flows of products through the traditional markets have occurred where the public sector has tried to enter and either become the sole purchaser or set ceiling prices for a commodity.

### 2.2.1. Transport and Network Flows of Products

#### Domestic Production of Livestock. (a). Transport network and rates.

The majority of the population is concentrated in the western one-third of Syria (table 2.4). The road and railroad system is developed with all weather roads connecting the administrative capital of each mohataza (figure 2.1). The major traffic flows are north to south linking the agricultural areas and mediterranean port cities in the north with the capital of Damascus and other Middle Eastern countries.

Even though there is a rail line between the North and South of Syria, most of the livestock moved by trucks. Caravan trucks with double decks are numerous with regular traffic between Aleppo and Damascus. Availability of trucks does not seem a problem in transporting livestock. Transportation rates for shipping livestock are established by cooperatives made up of truck owners. Transportation rates between various locations in Syria are listed in table 2.5. The transportation rates apply

Table 2.4. Domestic Livestock Production and Recorded Slaughter by Mohafazat, 1977

Mohafazat	Human Population	Cattle		Sheep		Goats	
	(number)	Population	Slaughter <sup>a</sup>	Population	Slaughter <sup>a</sup>	Population	Slaughter <sup>a</sup>
1. Damascus	1,457.9	113	5	363	463	204	0
2. Aleppo	1,316.9	21	11	1,228	211	172	5
3. Homs	546.1	95	22	1,086	126	50	17
4. Hama	514.7	62	5	1,281	131	71	24
5. Lattakia	389.6	63	4	26	69	25	3
6. Deir-es-Zor	292.8	46	8	620	96	43	15
7. Idlib	383.7	34	3	414	62	92	5
8. Al-Hassakeh	468.5	43	5	898	49	90	8
9. Al-Rakka	243.7	2	0	771	18	52	1
10. Al-Sweida	139.7	18	2	135	4	88	0
11. Dar'a	232.5	40	3	188	12	80	-
12. Tartous	302.1	92	5	30	24	34	6
13. Quneitra	16.5	10	-	30	-	9	-
Total	6,304.7	639	73	7,070	1,275	1,010	84

<sup>a</sup>Estimate does not include uninspected slaughter which can be equivalent to inspected slaughter.

Figure 2.1. Transportation Networks in Syria

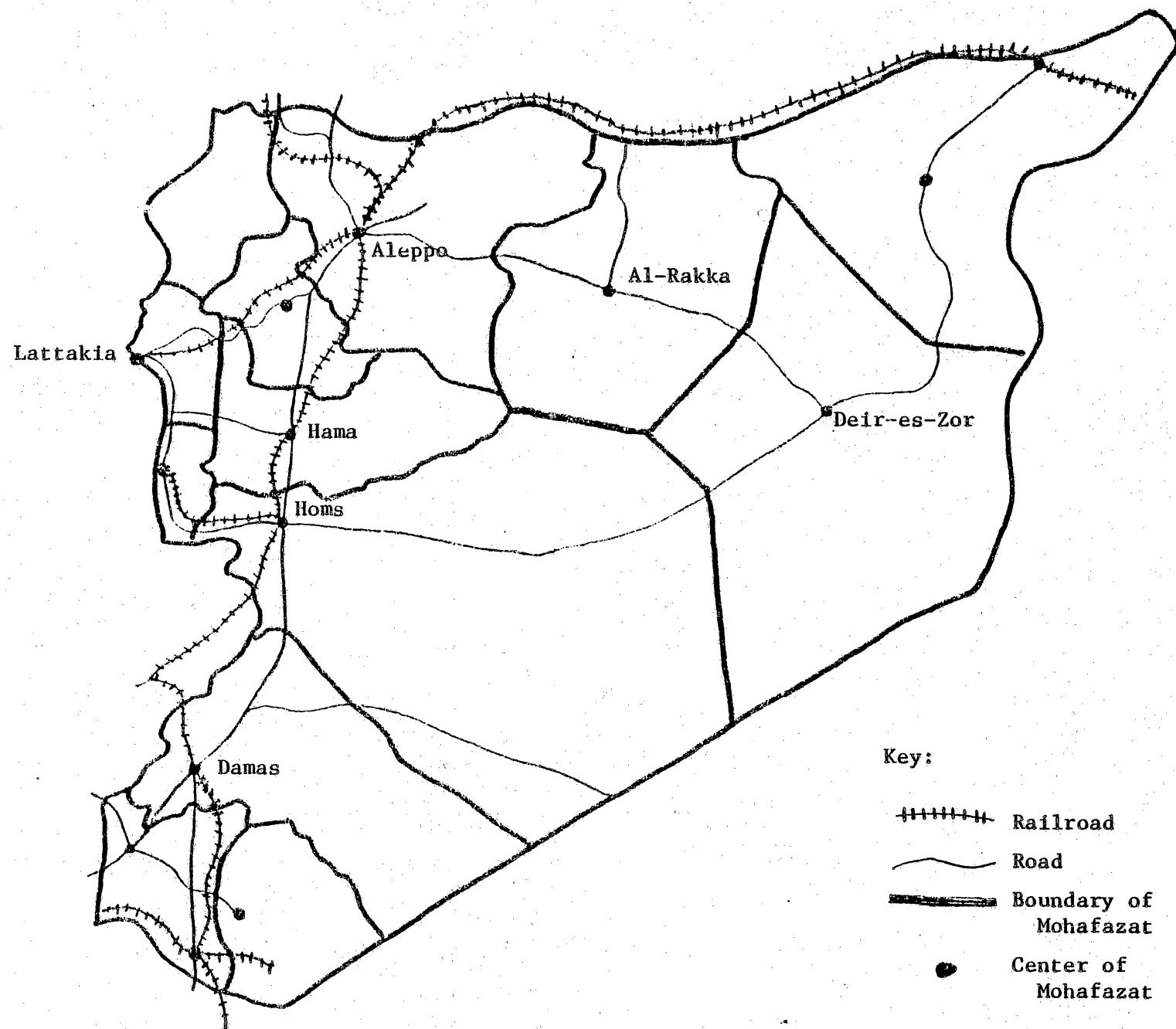


Table 2.5. Transportation Rates for Shipment of Sheep Between Interval Cities in Syria, 1979.

Location	km.	Transportation Charge/Truck
Aleppo to Damas	355	525
Aleppo to Latakia	186	
Aleppo to Hama	146	
Aleppo to Homs	196	
Hama to Homs	47	
Hama to Damas	209	450
Homs to Damas	162	
Al-Hassakeh to Dier-es-Zor	177	
Dier-es-Zor to Aleppo	317	
Dier-es-Zor to Homs	529	
Dier-es-Zor to Damas	691	

Source: Shippers of Sheep.

to sheep which are the primary type of livestock transported.

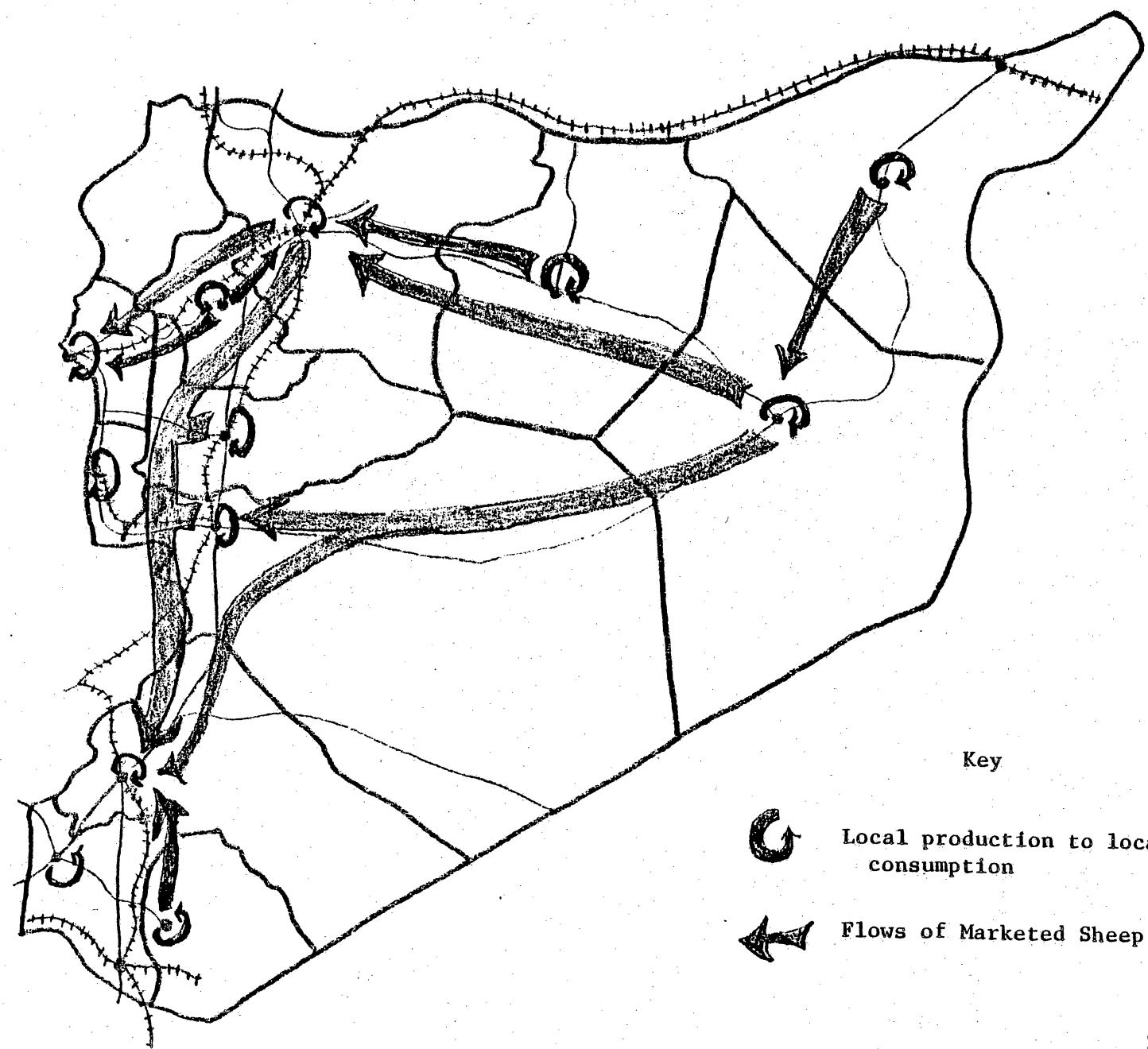
A double decker caravan truck is able to hold approximately 110-120 small sheep and 70-80 large size sheep. The transportation charge from Aleppo to Damascus was S.L.525 per truck in March, 1979 plus S.L.50 for the attendant who manages the sheep. From Hama to Damascus, transportation charges was reported at S.L.450 per truck.

A specialized meat trade operates between Aleppo, Hama, and Homs in the livestock surplus region and Damascus, the nation's capital. Deboning of carcasses and shipment of red meat is carried on daily. There are approximately 10 butchers in Aleppo and 50 butchers in Hama involved in this trade. For example, a butcher in Hama delivers daily to Damascus. 150 kg of lamb/mutton and pays S.L.0.25 per kg for transport. The meat was transported in a private car or taxi which goes daily from Hama to Damascus. Another butcher in Aleppo was involved in a similar trade, except marketing boneless beef, approximately 150 kg per day and paid S.L. 0.30 per kg. for transportation.

(b). Flows of Livestock products.

Based on production and slaughter estimates for each mohafaza in Syria found in table 2.4, the trade flows between surplus and deficit regions are illustrated in figure 2.2. The small circular arrows on the figure indicate that local production goes to satisfy local demand for livestock products. If recorded slaughter exceed production in the mohafazat, then the region is meat deficit and requires supplies from other regions. Latakia and Damascus are the major meat deficit regions. Latakia received additional supplies either from Aleppo or from imports of either live or frozen sheep. Information in table 2.4 indicates

Figure 2.2. Internal Flows of Marketed Livestock in Syria



goats would not be transported to other mohafazat since regional production exceeds the region's demand.

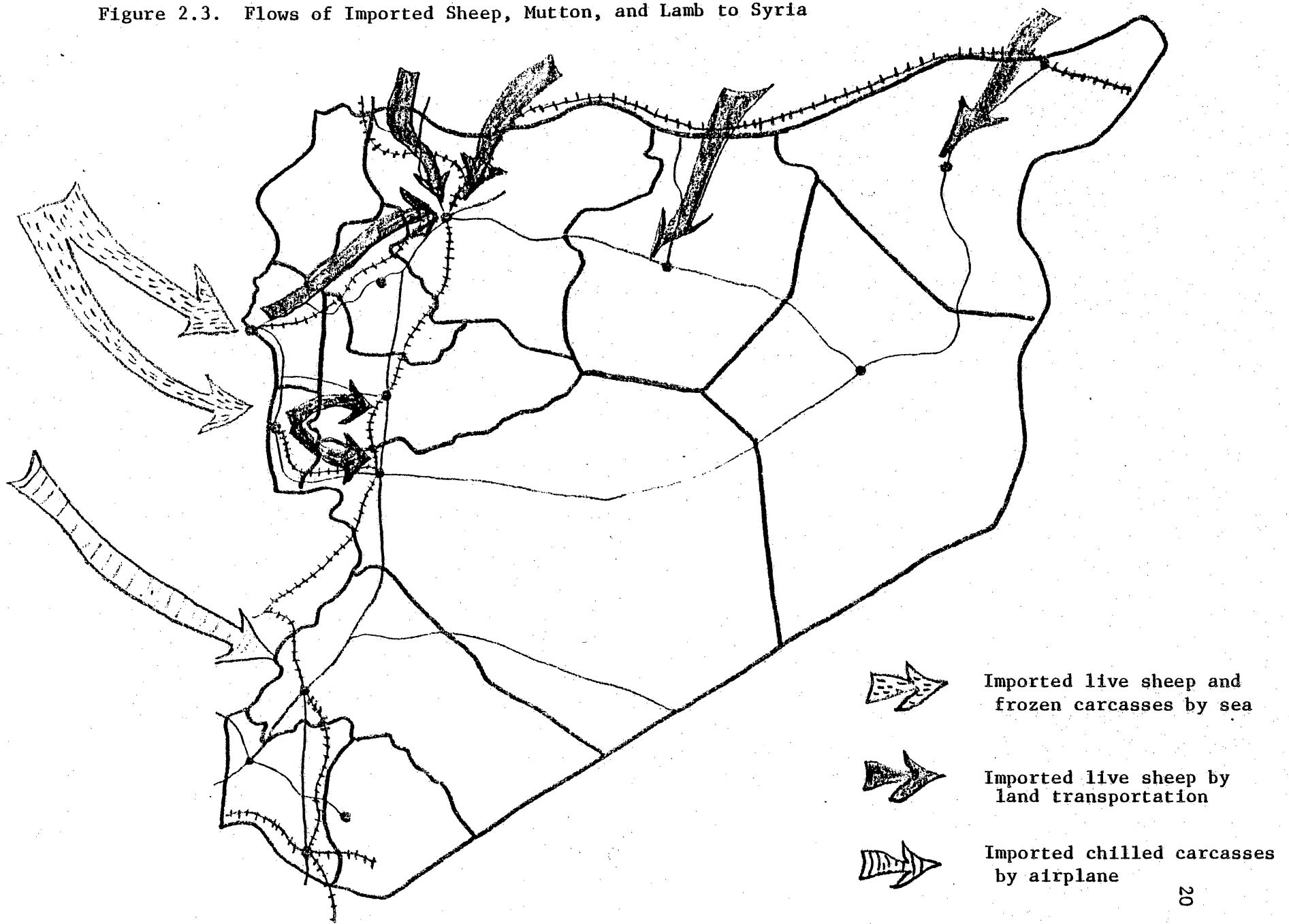
The major flows of sheep are to Aleppo, Hama, and Homs where there are large secondary markets. Sheep are purchased either for fattening or for slaughter. Slaughter stock will be either butchered for meat in these cities, sold to the government's Meat Organization for transportation to Damascus or sold for export to the Gulf States.

Imports of Livestock and Meat (a). Transport network and rates.

A major trade in the importation of live animals occurs between Syria and Turkey. Private traders purchase sheep in Turkey with peak trading period beginning in October-November and lasting until March. Sheep are purchased thin and sold for fattening. For Hamara sheep from Turkey, sheep fatteners paid \$1,900 per metric ton (m.t.) in March, 1979. Many of the imported animals from Turkey reportedly are trekked across the border illegally; however, some sheep are transported by truck or by train under license.

Another important entry of livestock is through the ports of Latakia and Tartous (figure 2.3). Imports have been either sheep to be fattened in Aleppo and Hama or frozen meat for the large urban areas. The major importer has been the state-owned Meat Bureau, a division of the General Consumption Institution (G.C.I.) in the Ministry of Supply. A contract in 1979 between G.C.I. and the government of Romania was for frozen mutton at U.S.\$1,650/m.t.,- plus freight. For 1979, G.C.I. also signed a contract with Romania for 50,000 sheep to be delivered to the government's fattening operations in Hama and Aleppo.

Figure 2.3. Flows of Imported Sheep, Mutton, and Lamb to Syria



(b). Flow of Imported Livestock and Meat

G.C.I. also imports chilled lamb carcasses from Bulgaria and Romania by airplane. Air shipments of meat are only for Damascus with the purpose of holding down the retail prices for meat and providing sufficient supplies. In a recent contract with Bulgaria, G.C.I. paid U.S.\$2,750 per metric ton (m.t.) - cost plus freight (C&F). In addition to C&F value G.C.I. was required to pay a 15% customs duty and 2% for insurance. Because G.C.I. controls the Damascus market for purchase and distribution of meat, the government has arranged for 2,000 tons of fresh meat in 1979. for Damascus. In the first and second quarters of 1979, G.C.I. has been taking delivery of between 13-16 tons by plane every other day. Quantities imported by Meat Organization and their costs are listed in table 2.6.

Exports of Livestock and Meat

Livestock are exported mainly to the Gulf States. Before the Civil War in Lebanon, this country was an important importer of Syrian livestock. Livestock for export are mostly trucked; however, the illegal export of sheep reportedly is carried on by trekking sheep across the border into Jordan and then transported by truck. Sheep fattened in Hama, Homs, or Aleppo are shipped directly by private trucks to Kuwait, Saudi Arabia, or Qatar. A truck hauling sheep from Aleppo to the Gulf States takes 5 days for a round trip. Transportation charges in March, 1979 was S.L. 2,500 for rental of a truck which is approximately S.L. 22 per animal.

(b). Flows of Exported Livestock and Meat

Exports of livestock from Syria from 1965 to 1976 are listed in table 2.7. Sheep and goats are the major export items. In 1977, the value of exported sheep and goats was S.L. 3.5 million (Central Bureau of

Table 2.6. Quantity and Costs of Import of Meat by the Meat Organization, 1976-1978.

Year	Qtr.	Product	Quantity	Delivered	
				M.T.	Costs \$/M.T.
1976	2nd	frozen mutton	950	1,325	53
		chilled mutton	500	2,235	373
1978	3rd	frozen beef	500	1,258	50
		frozen mutton	1,000	1,270	51
1978	2nd	fresh mutton	950	2,700	451
		fresh veal	500	2,250	376
1979	4th	frozen mutton	1,000	1,645	66
		fresh mutton	2,500	2,750	459
		frozen mutton	-	1,650	66

<sup>a</sup>The import duty is 16.70% of the value of fresh meat and 4% of the value of frozen meat. Insurance is 2% of the value.

Table 2.7 Exports of Livestock from Syria by Years.

Year	Sheep	Goats	Cattle and Buffalo	Camels
1965	510,392	27,691	39,882	188
1970	332,284	108,811	64,082	-
1971	91,546	39,006	20,794	22
1972	170,133	9,336	54,158	150
1973	178,463	19,982	29,141	50
1974	437	121,336	21	-
1975	963,649	339,481	52	
1976	283	21,256	2	-
1977				

Source: Statistical Abstract - 1976, Ministry of Supply and Home Trade.

Statistics, 1978). Only a very negligible number of cattle, buffalo or camels are exported. Syria is a net importer of meat and meat preparations, exporting S.P.1.3 million while importing S.P.13.5 million in 1977 (CBS, 1978). Because Syria exports live animals rather than meat the value added by slaughter is lost, but the premium for live exports are probably more than enough to offset this loss.

Exports of Hides, Skins, Wool and Hair Products. (a) Transport Network and Rates

Hides, skins and wool products are an important by-product because of its foreign exchange value. Public and private owned tanners are located in Damascus, Homs, Hama, and Aleppo. The government operated tanneries are in Damascus and Aleppo. Leather products for export are shipped by truck from Damascus to Tartous or Latakia and then by ship to either Italy or France.

Estimates of annual production of hair and wool are listed in table 2.8. Most of the wool exported from Syria is washed by hand and exported from either Tartous or Latakia by ship. There are 10 to 15 major private wool exporters in Syria located in Damascus, Homs, Hama, and Aleppo. The marketing system for exported wool appears to operate efficiently with peak season being from May until October.

(b). Flows of Animal Products

The value of the hides and skins exported in 1977 was S.L. 38 million with Italy and France as the major importing countries. In 1977, Syria imported S.L. 19.8 million in hides and skins for manufacturing into consumer products. One source of imports is from the Gulf States area. The value of wool exported in 1977 was estimated at S.L. 49.6 million. The

Table 2.8. Production of Washed Wool and Goat Hair in Syria, 1971-1977.

Year	Goat Hair	Washed Wool <sup>a</sup>
-----tons-----		
1971	533	6,443
1972	438	6,071
1973	355	5,497
1974	353	7,114
1975	481	6,170
1976	459	6,560
1977	467	6,834
Annual Ave.		
1975-1977	469	6,521

Source: Central Bureau of Statistics, 1978.

<sup>a</sup> Recorded amount through official marketing channels.

transportation system seems adequate to ship larger quantities of wool by sea to major markets in Eastern or Western Europe.

#### 2.2.2. Processing Facilities

##### Sheep Fattening (a) Structure of Industry.

The sheep fattening operations in Syria rely on supplies from domestic production and imports. The fattening centers are located in the major secondary markets of Homs, Hama, and Aleppo. The fattening buildings are located near the market in each city for convenient access. Private individuals, the Meat Bureau of G.C.I. and feeding cooperatives are involved in fattening of sheep.

The G.C.I. has three fattening centers located in Homs, Hama and Aleppo. There are approximately 56 feeding cooperatives in Syria, and several hundred private individuals involved in fattening. G.C.I. and the cooperatives compete for input stock, while the larger private fattening operators send their own buyers to Turkey to purchase sheep. Some private fatteners operate as both importers and exporters.

The government has found it easier not to purchase directly from Turkey because of administrative and technical difficulties. Government buyers purchase fattening stock from the markets of Homs, Hama, and Alepp. G.C.I. has difficulty in being able to purchase available livestock and sometimes has to pay a higher price.

##### (b) Production Costs

Many different breeds of sheep are used in fattening. The preferred domestic breed is Awassi because of its lower ratio of fat to carcass weight. Consumers also have a preference for the meat from this animal. Imported sheep from Turkey which are also preferred for fattening are the Garha, Hinnik and Hamara breeds. Garha have the highest daily rate of gain

compared to the other breeds of imported sheep. An average daily gain of 250 grams for Turkish sheep was reported by private operators in Hama and Aleppo. The domestic breeds have a lower rate of daily gain of 150 grams.

In table 2.9, production costs are estimated for fattening Turkish sheep. The analysis indicated that the fattener received a net profit of approximately S.L. 51.33 per head for sheep fattened for a period of 90 days. The margin of profit fluctuates based on season of the year. Availability of feed, feed price, supply of feeder sheep, and price of fattened sheep in the market can all influence the net return to the producer.

(c) Profit Margins for Exported Sheep and Performance of Fattening Operations.

Government regulation requires that 20% of all imported sheep must remain in Syria. Because of the demand for mutton in the Gulf States, these importing countries influence the live price for sheep in Syria. The price per kilogram liveweight in Kuwait and Saudi Arabia are between S.L. 3.00 - 4.20/kg. higher than prices in Aleppo. Margin of profit to exporters of sheep is estimated in table 2.10. On every animal exported, the exporter was estimated to receive S.L. 103.00 per head.

The fattening cooperatives, which number 56, and the government fattening centers are not capable of realizing this return on their investment because they are restricted to the domestic market. The Meat Bureau is the largest purchasers of fattened sheep and is officially a monopsonist in purchasing sheep for the Damascus market. The price offered for fattened sheep by the Meat Bureau is below the export price because the government is trying to maintain low consumer prices in urban areas.

Table 2.9. Cost of Fattening Imported Sheep from Turkey for Slaughter in Syria, March, 1979.\*

<u>Cost</u>	<u>S.L./hd.</u>
Purchase price F.O.B. Turkish sheep weighing 40 kg. @ US\$1900/m.t. liveweight . . . . .	296.00
Transport by Train from Turkey to Aleppo . . . . .	5.00
Custom duty. . . . .	20.00
Operating and feeding expenses <sup>a</sup> for 90 days @ SP1.50/day . . . . .	135.00
Total cost per head . . . . .	<u>456.00</u>
 <u>Revenue</u>	
Sale price of fattened sheep weighing 70 kg after 90 days @ S.L. 7.91/kg. . . . .	498.33
Wool from fattened sheep is 2 kg per head @ S.L.4.50/kg . . . . .	<u>9.00</u>
Gross Revenue . . . . .	507.33
Net Profit . . . . .	51.33

<sup>a</sup>Average daily rate of gain for Turkish sheep is approximately 250 grams.

Source: From personal interviews with government and private fattening operations in Hama and Aleppo.

\*Yearling

Import at 40-45 kg  
Sold at 70-80 kg.

Table 2.10. Net Revenue from Sheep Fattened in Aleppo and Sold in the Gulf States of Kuwait on Saudi Arabia, Spring, March, 1979.

<u>Costs:</u>	<u>Value (S.L./hd)</u>
F.O.B. Aleppo (63 kg./hd.) . . . . .	551.21
5% mortality rate in transit from Aleppo to Gulf States . . . . .	17.00
Custom Duty . . . . .	20.00
Transport Charges . . . . .	<u>22.73</u>
Total Costs . . . . .	614.94
 <u>Revenue</u>	
Sale price of sheep in Kuwait of S.L. 12.00/kg assuming each sheep weighs 59.9 kg accounting for 5% shrinkage in transit . . . . .	<u>718.00</u>
Net Revenue per head . . . . .	<u>103.05</u>

The fattening cooperatives, presently, do not have bargaining power to negotiate a higher price with the government since the major buyer is the government controlled Meat Bureau. This system makes it difficult for the fattening cooperatives to compete with privately owned fattening operations who have import/export privileges to sell in the higher priced export market.

#### Slaughter Facilities

In the two largest urban areas of Damascus and Aleppo, slaughter capacity and facilities for livestock are adequate. The slaughter plants were designed the same and each have been operating for four to five years. The slaughter facility in each city is owned and operated by the local municipality and a fee is charged to cover operating expenses and maintaining the plant. In the smaller cities and towns, the local municipalities own the facilities but do not provide butchers for slaughtering the livestock. The owner of the animals must provide his own butcher and pays only a fee for use of the building and veterinary inspection.

##### (a) Operating Conditions for Slaughter facility in Damascus.

Slaughter capacity for the slaughter plant in Damascus is approximately 2,400 head per day. The plant maintains one operating line of butchers. The Damascus plant employs 176 laborers, veterinarians, and administrators. The Damascus slaughter plant is required to supply the government's Meat Bureau. Supply of livestock to the plant has been at less than full capacity requirements. The government restricts supply because of the loss in animals purchased at current market prices are higher than the wholesale prices charged to butchers. The Meat Bureau recorded a loss of S.L. 1 million in 1978 to supply meat to Damascus.

The slaughter plant in Damascus charges S.L. 6.00 for lambs per head, S. L. 6.80 for slaughtering sheep and goats and S.L. 17.50 for slaughtering cattle and 19.50 for camels. The slaughter plant is staffed at near to full capacity, but by operating at less than full capacity, the Meat Bureau loses additional money. The slaughtering of beef if conducted by private butchers with a fee collected for use of the building.

The municipality of Damascus is responsible for the slaughtering of the animals. The operation of chilling the carcasses and distribution of meat to butchers is the responsibility of the Meat Bureau. Carcasses are chilled for twenty hours to form a protective layer over the carcasses reducing the growth of bacteria. Refrigeration space is more than adequate with half of the cooler space being unutilized. Because of the line of authority in control of the plant's facilities, maintenance of the plant has been below standards. The killing floor receives the best attention, but cooler salons, loading docks, and transport vehicles are not maintained properly. Areas in the plant used for deboning of meat were crowded and unkept with pools of water and blood standing in the main corridors. The entry and preparation chamber for slaughtering live animals could be better designed to control the animals and reducing the risk of injury to employees.

(b). Operating conditions for slaughter facility in Aleppo.

The slaughter facility in Aleppo has a capacity of 2,400 head per day. Currently the plant slaughters between 700-800 head per day while maintaining a full-time staff of approximately 300 employees. Average wage to employees is approximately S.L. 500 to S.L.600 per month. The facility lost approximately S.L. 300,000 in 1978.

Unlike in Damascus, all phases of the plant's operation is under one manager. The operation and cleanliness of the plant was found to be better than in the Damascus plant. Based on an assumed daily throughput of 1,500 head, the fee paid for slaughter by owners of sheep is S.L. 7.25/hd. Breakdown in costs are listed in table 2.11. The slaughter fee paid by each owner is S.L. 7.28, currently, even though the plant is slaughtering an average of 700 head per day. The plant loses S.L. 5,460 each day it operates in 1979.

There are 30 - 40 private suppliers of live animals to the Aleppo slaughter house. Each owner has designated stalls outside the slaughter house in the covered holding pens. Slaughter of animals begins around 6am and is completed by 9a.m. The order of slaughter is by random selection, and carcasses are stored in cold storage according to the order of slaughter. Each morning carcasses are moved from cold storage on rails down to the salon floor where sellers of carcasses negotiate with butchers on the price for the carcass. Prices for meat will vary from day to day depending on season of the year, time of the week, and whether it is early or late in the morning. Price per kilogram of carcass meat can vary by as much as S.L.1.00 to S.L.1.50 between the first carcass to enter the salon and the last carcass to leave the cooler. There are an estimated 1,500 butchers in Aleppo, and on the average 500 butchers come to the slaughter house every morning buying supplies for two to three days.

#### (c) Performance of Slaughter Facilities

Even though Aleppo and Damascus each have modern slaughter facilities, the performance of these facilities is well below standards. Each facility is grossly underutilized while at the same time large number of carcasses are

Table 2.11. Cost Breakdown for Slaughter of Sheep in Aleppo Slaughter Plant.

Charges	Value (S.L.)
Overnight in shelter . . . . .	.50
Slaughter and skinning . . . . .	1.50
Refrigeration . . . . .	.33
Rental of salon space . . . . .	.45
Utilities . . . . .	2.00
Stamping and certification . . . . .	2.50
<b>Total cost . . . . .</b>	<b>7.28</b>

Source: Personal interview with plant manager, Aleppo.

being slaughtered outside the slaughter plant. The ratio of carcasses per day to the number of employees is low, anywhere from 2 to 1 to 7 to 1 in the Damascus plant while in Aleppo it is lower approximately 2 to 1 to 3 to 1 carcasses per worker based on slaughter data in tables 2.12-2.13. Because supplies of animals to the plant have decreased in Aleppo, the government has not scaled down their number of employees resulting in greater loss and low efficiency compared to Damascus plant.

Several reasons can be identified as to why performance of the facilities is low. In Damascus daily, approximately 59% of all slaughtered sheep carcasses is from uninspected slaughter. With over 1,200 butchers in Damascus, the supply of animals by the Meat Bureau has not been adequate. The reason has been that if the Meat Bureau purchases the necessary number of sheep to meet daily demand their losses would be extremely high. Meat Bureau minimizes its losses by slaughtering fewer animals. Because government controls the meat supply and sets retail prices, low performance is directly related to government's policies. The trade in uninspected slaughter is important to supply needs of consumers which government is not willing and/or capable of supplying even though their policy is to monopolize the market.

The poor performance of the slaughter plant in Aleppo is attributed to different factors. The government maintains the slaughter facility and transportation of carcass meat from plant to butcher shops, yet the majority of slaughter is uninspected. The central market for livestock is far from the slaughter house so some butchers find it more convenient to slaughter sheep at home and also avoid the slaughter fee of S.L.7.25 per head. Because of the ban on slaughter of females at the slaughter

Table 2.12. Record of Slaughter of Livestock in Damascus Slaughter Plant, 1978.

Month	Type				Daily Slaugther of Sheep/Lamb <sup>a</sup>
	Sheep	Lamb	Camel	Cattle	
- - - - - (head) - - - - -					
January	25,055	10,431	22	485	1,314
February	18,716	14,034	20	410	1,365
March	16,683	20,289	22	490	1,370
April	5,061	36,049	20	473	1,581
May	19	47,045	25	418	1,743
June	18,370	33,442	32	372	1,993
July	10,637	24,045	37	362	1,285
August	7,989	36,136	40	530	1,633
September	3,449	16,124	24	396	752
October	3,060	20,770	27	163	882
November	713	14,463	19	430	584
December	6,185	20,565	18	394	991
Total	115,936	293,402	306	4,923	
Ave. Daily Slaughter					1,291

<sup>a</sup>Based on a six day work week.

Table 2.13. Record of Slaughter of Livestock in Aleppo Slaughter Plant, 1978

Month	Type					Daily Slaughter of Sheep/Lamb
	Sheep	Lambs	Goats	Camel	Cattle	
- - - - - (head) - - - - -						
January	9,078	4,526	217	235	585	504
February	7,724	11,829	198	225	730	815
March	6,323	6,109	92	219	734	460
April	4,202	9,037	99	223	283	509
May	3,008	6,847	221	163	563	365
June	4,742	10,071	384	229	686	570
July	8,156	11,390	495	362	760	724
August	1,005	7,523	344	376	969	316
September	7,247	5,126	165	279	606	476
October	8,280	5,168	254	325	746	498
November	7,862	1,696	105	229	694	368
December	9,372	1,149	74	262	723	390
Total	76,992	80,471	2,648	3,127	8,079	
Ave. Daily Slaughter						500

<sup>a</sup>Based on six day work week.

house, merchants will slaughter these animals outside government's control.

The government does impose a requirement that all skins from carcasses slaughtered at the plant must be sold to the government's tanning plant.

The price paid is S.L. 13.00 per hide which was 40% lower than the market price in the Spring of 1979. These factors contribute to the plant operating below capacity while twice the number of carcasses were being slaughtered privately.

Slaughter capacity is available at both plants with trained butchers and veterinarians to serve the industry. Governments involvement in the marketing system has not encouraged the private sector to utilize these facilities. Performance will continue to remain low as long as disincentives are placed on suppliers causing them to utilize illegal slaughter facilities.

In other municipalities like Homs and Hama, the government provides only veterinary certification and a small fee for use of the facility.

The slaughter facilities are not as modern as those of Aleppo or Damascus, and in some cases sanitation conditions are below standards. The municipalities have not suffered any economic losses by maintaining buildings, but the community has received carcasses which have been slaughtered in conditions comparable to those for illegally slaughtered carcasses in Aleppo and Damascus.

#### Hide and Skin Tanneries. (a) Description of Tanneries.

The government has three factories for the processing of hides and skins. Two of these factories are in Aleppo and the third is in Damascus. One plant in Aleppo and the plant in Damascus are relatively new designed by a French firm and completed in 1974 but not opened until 1978. The plants were constructed with a capacity that could handle the skins

from the government's slaughter plant. The tanneries are operated by the government's Arab Trading Company. The plants in Aleppo and Damascus have a capacity of handling 3,000 sheep skins per day and approximately 600 cow hides per day. Currently, the Damascus tannery receives 40% of its skins from domestic production and 60% from imports, primarily Middle East countries.

The plants produce unfinished leather, fancy leather, and lining leather. The factory in Damascus exports 70% of its leather to Italy and France. The tannery supplies 30% to local industries for manufacturing shoe wear. The tannery does dying of leather only on custom order, but now most of their exports are as unfinished leather. Wool from the skins are sold to the private sector. The tannery in Damascus sells some of its wool to the military for manufacturing of clothing and blankets.

(b) Operational Losses of Tanneries

Operational cost estimates were only available for the Damascus tannery but all information is applicable to the similar plants in Aleppo. The difficulty that the tannery faces is insufficient supplies of skins. The plant must import up to 60% of its skins. The Arabs Tanning Co. pays S.L. 16.00 per piece for a small sheep skin and S.L. 17.00 for a large piece. In the private market, the price of a skin can go as high as S.L. 32.00 per piece during the winter. During the spring, prices for skins are their lowest and have been S.L. 14.00 - S.L. 16.00 per piece. The Arab Tanning Company imports skins from the Gulf States and have paid S.L. 20.00 per piece in 1979. The tannery purchases cow hides from the private sector and pays a fixed price of S.L. 2.75/kg. greenweight. Manufacturing of the hides are from the Palestinian areas of Damascus where there is a higher number of private slaughterer of cows.

Average processing costs for a sheep skin at the Damascus tannery was S.L. 12.00 per piece. Cost for tanning cowhide was S.L. 1.55/sq. ft. These costs are applicable when plant is operating at full capacity which is currently not the case. At full capacity the plant requires 100 laborers and 30 administrators. A recent contract was signed for leather to be sold to Italy for U.S.\$7.00 per piece. At this price the plant is just breaking even on operating costs without considering the cost of their capital. Current list of sale prices for different products are listed in table 2.14.

(c) Performance of Damascus Tannery

Given the current system of obtaining supplies of hides and skins, the tannery is unable to obtain sufficient supplies to operate at full capacity. Cost per unit of output is higher reducing the margin of net profit to pay for the cost of capital. Because the slaughter plant was to be the tanneries major supplier the tannery finds difficulty in paying the higher market price for hides and skins. Because of the higher prices for sheep in the Gulf States, large quantities of live animals are exported, and the tannery has been required to reimport the skins from sheep fattened in Syria.

Based on information in table 2.14, the tanning factory makes a profit on each local skin of L.S. 9.50 if exported and L.S. 6.00 if skin was imported. The margin of net profit is lower for fancy leather or a loss if lining leather is sold on domestic market. The processing plant is unable to lower its production costs because of inadequate supplies of carcasses. The tanning plant must compete in the open market for skins which have domestic uses.

Table 2.14. Costs and Prices for Products of Damascus Tannery, April 1979

Item	Local skin	Imported skin
----- (S.L./price) -----		
<u>Cost:</u>		
Cost of untreated local sheep skin:	16.50	20.00
Production cost to treat skin	12.00	12.00
Total cost	28.50	32.00
<u>Sales:</u>		
<u>Export:</u>		
Export price	28.00	28.00
<u>Domestic Market:</u>		
Fancy Leather	23.63	23.63
Lining Leather	15.75	15.75
<u>Wool</u>	10.00	10.00
<u>Profit:</u>		
Export Market:	9.50	6.00
<u>Domestic Market:</u>		
Fancy Leather	5.13	1.63
Lining Leather	-(2.75)	-(6.25)

Wool Processing Facilities (a) Description of Industry

Annual production of Syrian wool is estimated around 12,000 - 14,000 metric tons (m.t.). Between 6,000 - 8,000 m.t. of annual production reaches the official marketing channels (table 2.8). The remainder of wool is utilized within the family or local village or is smuggled into Turkey. Up until 1945, Syrian merchants were involved with exporting Syrian and Iraq wool. Since that time Iraq has splintered off and developed its own export trade.

Syrian wool from Awassi is described as deserted wool which does not require excessive scouring. The best results have been achieved with hand washing which gives a better quality fleece than Syrian wool which has been scoured. Wool is purchased by merchants located in the major towns in the sheep production areas. Many small private businesses are operating to wash wool. The purchase price for wool is L.S. 6.00 - L.S. 7.00/kg on the average for grade 1 wool. Wool merchants will either sell the wool for export using one of the few commission buyers or use it for stuffing in mattresses. A commission buyer charges 1% of the value of product.

There are an estimated 10 to 20 major wool exporting businesses in Syria. These companies are located in Damascus, Homs, Hama, and Aleppo. These exporters clean, grade, and bale wool which is exported by either ship or by train. The recent F.O.B. price Latakia for Syrian wool was estimated at U.S. \$3.20 to U.S. \$3.30 (L.S. 12.80 - L.S. 13.20) per kg.

The government has entered the wool processing market with construction of a wool scouring plant in Hama with assistance from the United Nations. (Information about the plant was gathered from a personal source

in Damascus and must be treated cautiously until a further in-depth research can be conducted). The scouring plant, which was initially to be a pilot project, finally cost the Syrian government L.S. 70 million to construct. The plant has a capacity of 2,000 tons of greasy wool per year which produces 1,200 tons of scoured wool. The plant has only been able to purchase 15% of the marketable wool so the plant has been grossly under-utilized. The goal of the project was to reduce the amount of wool that Syria exports by processing it for local industry. The Syrian wool was to be manufactured into yarn mainly for carpet production, but has been dumped on the local market being sold for mattress stuffing because of its poor spinning qualities.

(b) Operation Costs of Hama Wool Processing Plant

Not all the details were available to construct operations cost. From a personal source, the production costs of scoured wool was estimated at L.S. 16.00 per kg., which is much higher than what the private sector can wash Syrian wool. Because Syrian wool is a deserted wool, harsh scouring procedures lowers the quality of final product which has a market value of L.S. 12.00 and is being sold for mattress stuffing. The spinning of Syrian wool does not have a good top-to-yarn yield because of its unevenness. To spin 100% Syrian wool into yarn can result in a 20-30% wastage and is not economical.

In the private sector, merchants hand wash Syrian wool, and it sells for S.L. 15.00-17.00 per kg. The higher price is because hand washed wool allows longer length of wool that is good for mattresses. Merchants use approximately 22 kg for one mattress. A wool washer can wash about 250 kg per day and charges L.S. 30 - 40 per day. Two private merchants

estimated it cost approximately L.S. 0.5-0.6/kg to wash, grade, and bale wool. The estimated costs of the Hama plant were L.S. 1.60-1.80/kg. for the same end product which had a lower market value.

#### (c). Performance of the Hama Wool Processing Facility

Performance of the scouring plant is low from secondary evidence available. The scouring plant was built larger than the viable market share. Using 100% Syrian wool results in a high wastage factor because of its unevenness in length. Instead of the plant being a major supplier to local spinning mills, the spinners are importing tops and yarn to spin to supply textile mills. The scouring plant is a high cost operation unable to be successful with its present operation. The plant produces a costly product which must be dumped on the local market and sold at below the current market price for hand washed wool for mattress stuffing.

#### 2.2.3. Market Facilities

##### Livestock Markets

Markets in Syria in general have not developed to insure efficient handling and selling of livestock. In the major livestock markets of Hama, Homs, and Aleppo, the markets are open areas with no sheds for protection. Sheep are herded into small flocks by each owner with buyers approaching the owner to negotiate a price. In all instances, any sale must be conducted with a "broker" who arranges for the negotiations and is a witness to the sale. The fee paid to the "broker" varies, but on the average is S.L. 3.00 per head (Figure 2.4 and 2.4c).

Animals can stand in the market for many hours waiting to be sold. During the hot summer months this causes shrink in the animals. Water and feed facilities are grossly lacking because buyers do not want animals full of water or feed during a sale. In each market, weight scales

were present but in poor condition. The weigh scale is owned and operated by a private individual who charges a fee to use the scale, approximately S.L. 1.. per weighing. Most of the animals sold are purchased at liveweight and then weighed to determine the total amount of money owed to the seller

At the market, there are no loading and unloading facilities (Fig. 2.4a). Each of these major livestock markets are close to fattening operations. At the fattening building, loading and unloading ramps were present for driving the animals into the trucks. Sheep ready for sale are driven from the fattening center to the market each morning. Unfattened animals which are brought to the market are bought by fatteners for either stall feeding or returned to pasture depending on time of the year and condition of the animal (Figure 2.4d).

#### Distribution and Wholesaling Facilities (a) The Private Sector

In the smaller urban centers, private merchants are responsible for distribution of meat from the slaughter plant to the butcher shops. Private merchants in the meat surplus areas of Syria, Homs, Hama, and Aleppo, wholesale and distribute carcasses or deboned meat for smaller butcher shops. The larger merchants in these cities have distribution systems which includes Damascus. Because of the shortage of red meat in Damascus, butchers slaughter and debone carcasses sending meat daily to Damascus. In Hama, there are merchants who fatten, slaughter, and distribute meat to Damascus daily. The transportation charge between Hama and Damascus is S. L. .25/kg. One merchant was supplying butchers in Damascus with 150 kg. and butchers in Homs with 70 kg. daily.

Figure 2.4 Sheep Marketing and Feeding Facilities in Aleppo, Syria

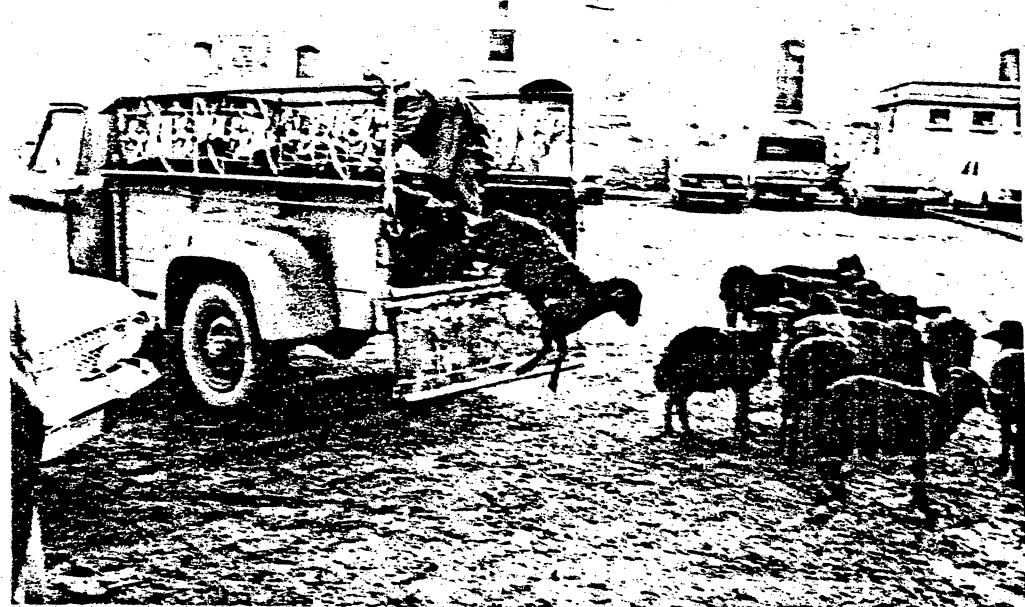


Figure 2.4a Aleppo Market has no loading facilities



Figure 2.4b Heifer delivered to market in small truck

Figure 2.4 (continued) Sheep Marketing and Feeding Facilities in Aleppo, Syria



Figure 2.4c Flocks awaiting buyers to come and negotiate



Figure 2.4d Sheep feedlot in Aleppo, Syria

The distribution and wholesaling facilities for beef is controlled by private merchants. Even in the government controlled market of Damascus, private butchers are responsible for transporting carcasses from the slaughter plant to butcher shops. Because of the fewer number of head slaughtered, government does not enter into this distribution system.

Wholesale outlets for beef are more common than for mutton. A few merchants slaughter animals and distribute on regular basis carcass meat to neighborhood butchers in the larger urban areas. Because there are many small butcher shops for beef, the marketing system benefits by having a few large dealers who wholesale the beef. A similar trade exists in the marketing of the offals of cows, sheep, and camels. A small number of agents specialize in wholesaling these specialty items. A primary need for these wholesalers is because government restricts retail outlets from selling different types of meat products reducing the volume of sales for any particular store.

(b). The Public Sector

The role of the public sector in the distribution and wholesaling of meat has been limited to Aleppo and Damascus. In Aleppo, government's involvement has been limited only to the distribution of meat from slaughter houses to the butchers. This is more a service rather than a means of control. Insulated trucks carry the sheep carcasses from the slaughter house to central points where butchers pick-up their carcasses. This service is paid for in the fees paid to use the slaughter facilities.

In Damascus, the government's Meat Bureau of the General Consumption Institute in the Ministry of Supply controls the allocation and distribution of mutton. After slaughter and storage of carcasses for 20 hours, the

Meat Bureau allocates carcasses on random basis to the butchers who are members of the Butcher's Syndicate. A butcher receives his carcass without choice, the weight is recorded and then loaded in an insulated truck for delivery to his pick-up point.

Because the Damascus plant is currently only supplying about 1,000-1,200 carcasses per day, the system is manageable. The distribution takes about 2 hours to complete beginning by 4a.m. and finishing around 6 a.m. If the plant operated at full capacity and the Meat Bureau was the sole supplier to Damascus, there would be difficulties in delivery of meat especially during the summer months. The trucks used by the Meat Bureau are old, and the insulation is beginning to wear. When carcasses are packed in the van, many are stacked on the floors and not hung properly increasing the incidence of contamination and spoilage, especially during the summer. The rear doors are removed so carcasses are transported with some hanging from the back on hooks exposing them to environmental pollution. If the government wishes to improve the distribution system, it will require investments in modern transport vehicles to meet the requirements of the Damascus market.

In Damascus, the Meat Bureau has vertically integrated their operation to include supplying 10 retail meat shops and several supermarkets owned and operated by the government. To service these shops, the Meat Bureau has a center in the slaughter plant for fabrication of meat. In the afternoon, butchers for the Meat Bureau debone carcasses. Meat is packaged as lean red meat or as mixed red meat with fat. Meat is packaged, weighed, and vacuum sealed. Meat is delivered to the shops in the evening around for sale the next morning. Butchers who deboned the carcasses at

the slaughter plant are paid a commission based on the quantity of meat deboned. Frozen carcasses, which only the government meat shops sell, are distributed at the same time as the prepacked fresh meat to the shops. This system of prefabrication at a center location allows increased efficiency with daily delivery of between 1,100 to 1,400/kg of packaged meat.

#### Survey of Retail Meat Shops

To gain an understanding of retail outlets, a survey of butcher shops was conducted in Aleppo and Damascus. The design of the survey is explained in Appendix I. These two cities were chosen to examine the difference between the government's control of meat wholesaling system in Damascus and the relatively open market operated by the private sector in Aleppo. In Damascus 18 mutton and 6 beef butchers were interviewed; and in Aleppo, 7 mutton and 4 beef butchers were interviewed. In each city poultry retailers were also interviewed which are examined in the chapter on poultry and egg marketing. Butcher shops were randomly selected from low, middle, and high income areas in each city. In addition to private shops, three government meat shops operated by the Meat Bureau were selected from the three income areas in Damascus.

##### (a) Mutton Retail Shops in Damascus and Aleppo (i) Description of Shops

There are approximately 1,200 mutton retail shops in Damascus while in Aleppo, there are over 1,500 mutton retail shops. In table 2.15, survey results are presented on the characteristics of the butcher shops sampled. Butcher shops in general were small and crowded. Average store size was 154 sq. ft. All mutton butcher shops were reported closed on Fridays observing the Muslim religious custom. Mutton shops opened in Damascus

Table 2.15. Characteristics of Private Mutton Butcher Shops in Damascus and Aleppo, March, 1979.

Item	Unit	Damascus				Aleppo			
		Low Income	Middle Income	High Income or average	Total	Low Income	Middle Income	High Income or average	Total
Shops surveyed	no.	6	6	6	18	2	3	2	7
Size of shops	sq.ft.	90	180	192	154	273	264	680	385
Ave. time open	am	6:30	7:30	7:00	7:00	7:00	7:45	8:00	7:45
Ave. time closed	pm	4:30	4:30	4:00	4:15	4:30	4:00	4:00	4:15
Closed on Friday	%	100	100	100	100	100	100	100	100
Ave. Employees/ shop	no.	2	2.3	2.7	2.5	3.5	4.3	4	4.0
Fulltime Employee	%	100	100	66	89	100	66	100	86
Operated by Rela- tives	%	100	50	33	61	100	50	0	43
Owner in Syndi- cate	%	50	83	67	67	100	100	100	100
Refrigeration	%	100	100	100	100	100	100	100	100
Display case	%	0	0	50	17	100	0	100	71
Freezer	%	50	67	100	72	100	33	100	57
Operator/owner	%	100	100	100	100	100	100	100	100
Owner has other job	%	17	0	0	6	0	0	0	0
Operator owns other shops	%	0	0	0	0	0	0	0	0

on the average at 7am and closed at 4:15 pm. Mutton shops open on the average later in Aleppo than Damascus stores at 7:45 am closing at about the same time at 4:15 pm.

The number of employees working in the mutton shops in Damascus was 2.5 people less than recorded for Aleppo with 4.0 employees per shop. For each respective income classification, there were more employees per shop in Aleppo probably reflecting the increased number of carcasses sold by each shop in Aleppo. On the average, similar numbers of shops had employees who worked full time. Fewer shops on Aleppo were completely staffed and operated by family members indicating possibly the more commercial nature of the shops in Aleppo because of the freer market with less government controls of supply. More owners interviewed in Aleppo reported being members of the Butcher's Syndicate than in Damascus.

All shops interviewed had refrigerators for storing meat which was not sold during the day. In the higher income areas in Damascus, 50% of all stores had display cases for their meat compared to none in the shops in low and middle income areas. A higher percentage of shops in Aleppo had display cases, 71%, indicating more consumer awareness on the part of butchers. In general more shops interviewed in Damascus had freezer facilities than Aleppo. All shops were owned and operated by the same individual and his shop was his only business with no outside source of income.

The general impression is that shops are family owned and operated which serve as the only source of income for the butchers. In Aleppo, shops seem larger and employ more staff which could be correlated with

the larger supplies of available meat. In Damascus, the Meat Bureau allocated a limited number of carcasses keeping store sales of inspected meat low.

(ii) Recorded Sales of Mutton Shops

Government regulation states that butcher shops are supposed to specialize in sales of one product. There are separate shops for mutton beef, poultry and offals. For mutton shops interviewed in Damascus, some reported selling several types of meat products (Table 2.16). Owners of mutton retail shops in Aleppo did not report selling other products. Offals from sheep were products that owners in five stores reported selling other than mutton. Most shops in the survey apparently were adhering to the government's regulation.

Average monthly sales for the first and second quarters of the year are recorded in Table 2.17. Average monthly sales for mutton retail shops in Aleppo were higher than in Damascus by 15% in the first quarter (1,243 kg vs. 1,084) and by 54% in the second quarter (1,661 kg vs 1,078 kg). For the first and second quarters, sales for shops for each income group in Aleppo exceeded sales in Damascus. High sales are attributed to Aleppo being in a meat surplus area and where the marketing system is less controlled.

The number of carcasses sold per day by each butcher shop was small (Table 2.18). The peak day of sales generally occurs on Thursday and Saturday corresponding to the days before religious observances. Average number of carcasses slaughtered for mutton retail shops in Aleppo exceeded the Damascus shops. The number of carcasses sold in the high income area of Aleppo seems low compared to Damascus and could be due to the small number of shops interviewed in Aleppo. For the festival of Adha, which occurs

Table 2.16. Types of Products Sold by Mutton Retail Shops in Damascus<sup>a</sup>

product	Damascus			Total
	Low Income	Middle Income	High Income	
No. / Shops				
mutton	6	6	6	18
beef		1		1
offals	2		3	5
poultry		1	2	3
eggs			1	1
dry groceries		1	1	2
produce		1		1
other		1	1	2

<sup>a</sup>

Mutton retail shops in Aleppo did not report selling any other products.

Table 2.17. Monthly Sales of Meat in Retail Mutton Shops in  
Damascus and Aleppo, March, 1979<sup>a</sup>

Products	DAMASCUS								ALEPPO							
	Low Income		Middle Income		High Income		Total		Low Income		Middle Income		High Income		Total	
	1st Qtr.	2nd Qtr.	1st Qtr.	2nd Qtr.	1st Qtr.	2nd Qtr.	1st Qtr.	2nd Qtr.	1st Qtr.	2nd Qtr.	1st Qtr.	2nd Qtr.	1st Qtr.	2nd Qtr.	1st Qtr.	2nd Qtr.
----- kg/mo -----																
Mutton	692	623	740	740	1287	1335	906	900	1050	1200	1000	1875	1800	1800	1183	1525
Beef	-	-	50	50	-	-	17	17	-	-	-	-	-	-	-	-
Offals	39	39	-	-	46	46	28	28	-	-	-	-	-	-	-	-
Poultry	-	-	85	85	240	240	108	108	-	-	-	-	-	-	-	-
Eggs	-	-	-	-	75	75	25	25	-	-	-	-	-	-	-	-
Total	731	662	875	875	1648	1696	1084	1078	1050	1200	1000	1875	1800	1800	1183	1525

<sup>a</sup>Not all stores in an income area reported sales of other products. Number recorded is average amount for all stores in income group.

Source: Survey of Mutton Butchers, March, 1979.

Table 2.18. Average Sales of Mutton per day and during religious festivities in Damascus and Aleppo

Sales/Day	DAMASCUS				ALEPPO			
	Low Income	Middle Income	High Income	Total	Low Income	Middle Income	High Income	Total
----- (carcasses/day) -----								
<u>Weekdays:</u>								
Sunday	1.0	1.1	1.8	1.3	2	2.0	1.5	1.9
Monday	.8	1.1	1.8	1.3	1.5	2.0	1.5	1.7
Tuesday	1.0	1.1	1.8	1.3	1.5	2.0	1.5	1.7
Wednesday	.8	1.1	1.8	1.3	1.5	2.0	1.5	1.7
Thursday	1.3	1.3	2.3	1.6	1.5	3.0	2.0	2.3
Friday	-	-	-	-	-	-	-	-
Saturday	1.2	1.3	2.2	1.5	2.5	2.0	1.5	2.0
Ave. Daily Sales	1.0	1.2	2.0	1.4	1.8	2.2	1.6	1.9
<u>Festivities:</u>								
Rammadan	1.7	1.5	2.7	2.0	2.0	2.0	2.0	2
Adaha	1.7	1.8	5.3	2.9	7.0	10.0	5.0	8
Christmas	1.2	1.3	2.0	1.5	2.0	2.0	1.5	1.8
Easter	1.2	1.3	2.0	1.5	2.0	2.0	1.5	1.8
Sales per Customer (kg/person)	.41	.62	.48	.50	.5	2.0	1.0	1.21

Source: Personal interview, March, 1979

approximately two months after Rammadan, butchers reported increased sales of carcasses. A 100% increase occurs in Damascus and a 400% increase in Aleppo (Table 2.16). For the other religious festivities, number of carcasses sold does not vary from the average daily volume. Average amount of purchase per customer was higher in Aleppo, 1.21 kg., compared to Damascus, .50 kg. Average quantity purchased in middle income stores was higher than for stores in the other income areas (Table 2.18). What is obvious is that average purchases in low income areas was reported the lowest of all income areas. Current price for mutton makes it more expensive than beef or poultry explaining the lower quantity consumed.

Some stores reported purchasing uninspected carcasses from outside the legal marketing channel (Table 2.19). Because it is illegal to purchase uninspected carcasses, some respondents were hesitant to answer this question. There was evidence of stores which did not report purchasing uninspected carcasses actually having them in their store. In Damascus, 66% of the stores interviewed reported purchasing uninspected carcasses. The largest majority reported purchasing uninspected carcasses. The largest majority reported purchasing carcasses (45%) while the rest (22%) purchased live animals which they slaughtered. Of those reporting purchases, average number received was 1.2 carcasses per day. Because the market is free in Aleppo with no strong allegiance to the Butcher's Syndicate it was difficult to get an honest reply to this question. One respondent, revealed he purchased 2 carcasses per day and knew many other butchers who did the same. Uninspected carcasses are the major sources of meat supplied in the cities of Damascus and Aleppo.

Table 2.19. Source of Uninspected Meat Not Purchased from Slaughter House.

	DAMASCUS		ALEPPO	
	No.	%	No.	%
Stores Not Buying Uninspected Carcasses	6	33	6	86
Stores Buying Uninspected Carcasses	8	45	1	14
Stores Buying Animals and Slaughtering	4	22	-	-
Average Carcasses Purchased/day (no)	-	1.2	-	2

(iii). Wholesale Prices Paid and Retail Prices Received by Mutton Butchers

Wholesale prices paid by butchers in Damascus and Aleppo during the first quarter of 1979 are listed in table 2.20. Wholesale prices for mutton locally produced supplied by the government's Meat Bureau was lower than prices from private sources in either Damascus or Aleppo. Government is controlling the price of carcass meat to butchers to try to keep retail prices from rising. Wholesale price for mutton from local production sell at S.L. 12.75/kg. in Damascus and imported chilled mutton sells at S.L. 13.50/kg. Imported frozen mutton is sold only at government stores at controlled prices. Prices for other products purchased by mutton shops are listed in table 2.20.

Butchers have differentiated prices for various cuts of meat from the carcass (table 2.20). Price for lean boneless mutton was highest in the high income areas of Damascus at S.L.24.33/kg which is above the government controlled price of 21.50. Prices for lean boneless mutton in Aleppo was slightly lower, averaging S.L.22.50. Average prices for mixed meat (50% lean and red meat and 50% fat) was slightly higher in Damascus than Aleppo. The fat of the carcass besides being mixed is sold separate. Retail price for fat was reported lower in Damascus. Wholesale and retail prices for other products sold by shops are listed in table 2.20.

(iv). Sale of Mutton Carcasses

Butchers were asked how they normally cut-up their sheep carcasses (table 2.21). Because in Damascus where butchers receive different types of carcasses, (locally fattened or imported), an average between the major types was selected. The largest percentage of the carcass, (36%), was sold as mixed meat, (50%) red meat and (50%) fat.

Table 2.20. Wholesale prices paid/on meat by Mutton Butchers and Prices Received for Meat in Damascus and Aleppo.

Product	DAMASCUS				ALEPPO			
	Low Income	Middle Income	High Income	Total Shops	Low Income	Middle Income	High Income	Total Shops
(S.L./kg.)								
<u>Wholesale Prices Paid:</u>								
<b>Mutton</b>								
Fresh Local-Govt.	12.75	12.75	12.75	12.75	-	-	-	-
Imported Meat-Govt.	13.50	13.50	13.50	13.50	-	-	-	-
Fresh Meat-Private	12.75	16.40	14.00	14.40	13.60	13.60	13.38	13.49
<b>Poultry</b>	-	8.00	8.45	8.23	-	-	-	-
Eggs (doz.)	-	-	3.40	3.40	-	-	-	-
Offals	15.00	-	20.00	17.50	-	-	-	-
Beef	-	17.00	-	17.00	-	-	-	-
<u>Retail Prices Received:</u>								
<b>Mutton:</b>								
Boneless	22.17	22.50	24.33	23.00	21.00	23.00	23.50	22.50
Mixed	14.92	16.25	18.17	16.44	16.00	16.80	16.00	16.27
Fat	5.50	7.00	5.00	5.83	8.00	8.00	8.00	8.00
<b>Poultry</b>	-	8.50	9.00	8.75	-	-	-	-
Eggs	-	-	3.50	3.50	-	-	-	-
Offals	18.00	-	22.00	20.00	-	-	-	-
Beef	-	18.00	-	18.00	-	-	-	-

Table 2.21. Average Dressing Percentages for Sale of Meat From Different Types of Carcasses Reported by Butchers in Damascus.

Item	Locally Fattened Turkish Sheep	Imported Carcasses by Meat Bureau	Average for all Carcasses
	- - - - - (%) - - - - -		
Boneless meat	23	32	28
Mixed meat	36	35	36
Bones	15	23	18
Fat	26	10	18
Total	100	100	100

<sup>a</sup>Carcasses are imported by air from Romania or Bulgaria.

Even though government controls prices, butchers can easily mix in more fat trying to minimize the loss from carcasses with a large percentage of fat. A relatively small percentage of the carcass was sold as lean red meat, 28% while 36% was sold as mixed meat. Bones had no value and were estimated at 18% of the carcass weight. The percentage of fat sold from a carcass was estimated at 18%.

The gross margin on two types of carcasses if sold at government control prices by butchers in Damascus is calculated in table 2.22. For a fattened Turkish sheep (Hamara), the butcher would lose S.L. 2.50 per carcass if sold at government controlled prices. For imported carcasses from Romania and Bulgaria, the gross margin was S.L. 14.00 per carcass. The difference between the margins was because of the high fat content in fattened Turkish sheep. Because of the lower live-weight price of Hamara or Herrick breeds, the Meat Bureau purchased more of these animals for the Damascus market. The preferred Awassi breed has a higher liveweight price in the market and many are exported.

#### (v). Performance of Butcher Shops

As an indicator of performance of the retail butcher shops, costs and returns to the shops were estimated in table 2.23. Gross returns, before cost of operations, indicated that butchers' shops in Damascus have a gross monthly return of S.L. 1,289 and for Aleppo, S.L. 1,698. The stores in the higher income areas had the largest gross revenues (table 2.23). The shops in low income areas had lowest returns after paying for the meat. In low income areas, butchers reported charging close to government's control prices, and the number of carcasses slaughtered per day was low. Shops in higher income areas reported charging higher retail prices. Butchers in the high income area reported selling more carcasses per day.

Table 2.22. Average Dressing Percentages for sale of meat from Different Types of Carcasses Reported by Butchers in Damascus

Item	Locally Fattened <sup>a</sup> Turkish Carcass	Imported <sup>b</sup> Carcass
<b>Revenue:</b>		
Boneless Meat (S.L. 21.50/kg)	148.35	137.60
Mixed Meat (S.L. 15.00/kg)	162.00	105.00
Fat (S.L. 9.00/kg)	70.20	41.40
Gross Revenue	380.55	284.00
Cost of Carcass <sup>c</sup>	382.50	270.00
Gross Margin	-(2.50)	14.00

<sup>a</sup>Average carcass weight for locally fattened turkish sheep is estimated to be 30 kg.

<sup>b</sup>Average carcass weight for imported carcasses was assumed to be 20 kg.

<sup>c</sup>Government price of locally fattened sheep (S.L. 12.75) and imported (S.L. 13.50).

Table 2.23. Average Monthly Costs and Returns for Mutton Butcher Shops in  
Damascus and Aleppo

	DAMASCUS								ALEPPO							
	Low Income		Middle Income		High Income		Total Income		Low Income		Middle Income		High Income		Total Income	
	No.	Value	No.	Value	No.	Value	No.	Value	No.	Value	No.	Value	No.	Value	No.	Value
	(L.S./Shop)		(L.S./Shop)		(L.S./Shop)		(L.S./Shop)		(L.S./Shop)		(L.S./Shop)		(L.S./Shop)		(L.S./Shop)	
<u>Revenue</u>																
Mutton	6	10,596	6	12,092	6	22,351	18	15,013	2	16,737	3	16,972	2	25,185	7	19,251
Offals	2	2,124			3	2,024	5	2,064								
Poultry			1	4,335	2	6,480	3	5,765								
Eggs					1	1,575	1	1,575								
Beef			1,	5,400			1	5,400								
<u>Gross Revenue</u>	6	11,304	6	13,715	6	25,786	18	16,935								
<u>Costs:</u>																
Mutton <sup>a</sup>	6	10,540	6	11,271	6	20,109	18	13,973	2	16,279	3	14,985	2	22,679	7	17,553
Offals	2	1,770	-	-	2	1,840	4	1,805								
Poultry	-	-	1	4,080	2	6,084	3	5,416								
Eggs	-	-	-	-	1	1,530	1	1,530								
Beef	-	-	1	5,100	-	-	1	5,100								
<u>Cost of Meat</u>	6	11,130	6	12,801	6	23,005	18	15,241	2	16,279	3	14,985	2	22,679	7	17,553
<u>Gross Returns</u>	6	174	6	914	6	2,781	18	1,289	2	458	3	1,987	2	2,506	7	1,698
Overhead	6	116	6	200	6	195	18	171	2	339	3	117	2	235	7	214
Wages	6	90	6	98	6	510	18	233	2	750	3	353	2	490	7	506
<u>Net Returns</u>	6	-(32)	6	616	6	2,076	18	886	2	-(631)	3	1,517	2	1,781	7	979
<u>Butcher's Estimated Net Return</u>	6	550	6	1,017	6	984	18	850	1	1,350	3	2,250	2	1,125	6	1,725

<sup>a</sup>Average wholesale price for mutton for butcher shops in Damascus was S.L. 13.13.

Net returns to butcher shops varied according to income areas. Higher income areas had higher net returns. Overhead consisted of monthly rent, utilities, and licenses paid by the butcher. Shops in low income areas were shown to have a loss after paying for overhead and wages. It would be reasonable to assume that all shops make a net profit by either adjusting the mixture of lean to fat and bone or selling above the government controlled prices. Butchers were asked to give an estimate of their net returns per month and the average for Damascus was L.S. 850 and in Aleppo L.S. 1,725. Net profits are lower in Damascus because of the restriction in available supplies from Meat Bureau and the high cost of carcass meat from illegal slaughters.

The decrease in performance in low income areas is that shops maintain on the average two employees but sell only one carcass per day and no other animal products. Sales per employee is low. In the higher income area of Damascus, shops sell three times as much mutton as in the low income area and also sell other meat products. The middle and higher income area shops have larger net returns because of increased volume of sales as well as selling above government controlled prices for meat.

(vi). Performance of Marketing System for Mutton in Damascus

Butchers in Damascus were asked their opinion of the quality of carcasses received from the Meat Bureau (table 2.24). The majority of the butchers (83%) said the meat was either fair or poor. In the low and middle income areas, the largest number of respondents said the quality of meat was fair. This would correspond to areas where more fat on the carcasses is tolerable to consumers. In high income areas, 50% of the butcher shops said carcasses were poor mainly because of the high ratio of

Table 2.24. Butcher's Opinion of Quality of Mutton Received From the Meat Bureau in Damascus.<sup>a</sup>

	DAMASCUS							
	Low Income		Middle Income		High Income		Total	
	No.	%	No.	%	No.	%	No.	%
<u>Response:</u>								
Good	1	17	1	17	1	17	3	17
Fair	3	50	4	66	2	33	9	50
Poor	2	33	1	17	3	50	6	33
Total	6	100	6	100		100	18	100

<sup>a</sup>This applies only to Damascus where the Meat Bureau controls the supply.

fat on the carcasses which is not preferred by customers who eat lean red meat.

The major reason given by butchers why quality of meat was only fair or poor was that carcasses were too fat (table 2.25). On occasion, butchers have to return a carcass to the slaughter house because they complain of a large fatty tail. Transport charges to and from the plant must be paid by the butcher. In several visits to the slaughter plant, butchers could be seen on the loading dock trying to negotiate for a replacement carcass. Seven respondents also complained that carcasses from the Meat Bureau were too small. Because the Meat Bureau does not grade carcasses, butchers have no control over selection but pay the same price

Approximately 45% of the butchers interviewed in Damascus said they purchased carcasses from private merchants (table 2.26). When asked to compare quality of carcasses received from private merchants compared to those of the Meat Bureau, four butchers said they preferred buying from private merchants because they can choose their carcasses (table 2.26). Ability to choose carcasses to purchase the desired quality and quantity seems most important to butchers. Butchers in Damascus were also asked to evaluate the present marketing system with the Meat Bureau compared to before when butchers received carcasses from private sources (table 2.27). Close to 100% of the butchers said their operations were better when the private merchants were supplying carcasses. The major reason given was that the quality of meat received was better. Other butchers complained that supplies were not sufficient for their customers. The general assessment of the performance of the marketing system in Damascus is

Table 2.25. Reasons given why Respondents Rated Quality of meat as Fair or Poor Received from Meat Bureau in Damascus.<sup>a</sup>

	<u>Respondents</u> <sup>b</sup> No.
Carcasses too fat	15
Carcasses too small	7
Carcasses not slaughter in Muslin custom	2
Carcassed imported have odor	2

<sup>a</sup>This applies only in Damascus where Meat Bureau has control of supply.

<sup>b</sup>Each respondent could give more than one response.

Table 2.26. Comparison in Quality of Meat Between Carcasses Received from Meat Bureau and those from Private Merchants in Damascus.<sup>a</sup>

	<u>Respondents</u> No.	<u>Percentage of</u> <u>Total Sample</u> %
Choice in buying carcasses from private merchants	4	22
Meat is cleaner from private merchants	1	6
No difference	1	6
Other	2	11
Total	8	45

<sup>a</sup>Only respondents who purchased from private sources were asked this question.

Table 2.27. Response by Butchers in Damascus as to whether their operation is better "now" with supplies from Meat Bureau or "before" with supplies from Private Sector.

	<u>Respondents</u>
	No.
Operation better now with Meat Bureau	0
Operation better when Meat Bureau was grad- ing carcasses	1
Operation better before with Private Sector	17
 <u>Reasons why better before with Private Sector:</u>	
Better Quality Meat	12
Adequate supplies	4
Price reflects quality	2
Choice in buying	2
Other	1

poor. Because of current pricing policies, the Meat Bureau has to purchase lower quality animals for the Damascus market. Even then, supplies are not adequate because the Meat Bureau with higher volume would sustain even higher financial losses than currently they do.

Compared to Damascus, butchers in Aleppo had fewer complaints about the marketing system. A few butchers did complain that the government set retail prices too low, but it is unlikely that many would adhere to them anyway. A few butchers did complain that delivery of carcasses from the slaughter plant was not reliable and would prefer earlier delivery. In general, most butchers had few problems.

(b). Beef Retail Shops in Damascus and Aleppo (i). Description of the Shops

The beef retail shops were surveyed in each city by income areas. Fewer shops were surveyed because of the smaller number of butchers in each city. Characteristics of the beef butcher shops are described in Table 2.28. In both cities the distribution of beef is relatively free to private merchants. The mohafazat of each city does control beef prices in each location. Beef shops in Aleppo are larger than those interviewed in Damascus. Shops in both locations have approximately the same hours of operation. The average number of employees was lower in the beef retail shops in general than in mutton retail shops interviewed (table 2.13). The majority of beef shops had display cases. The operator was typically also the owner of the shop and did not have other sources of income or own other meat shops. The general cleanliness of the beef shops was good.

(ii) Record Sales

Unlike mutton retail shops in Damascus, very few shops reported selling other items besides beef. In Damascus, two beef shops reported

Table 2.28. Characteristics of Private Beef Butcher Shops in Damascus and Aleppo, March, 1979

Item	Unit	DAMASCUS				ALEPPO				Total
		Low Income	Middle Income	High Income	Total	Low Income	Middle Income	High Income		
Shops Surveyed	no.	2	2	2	6	1	3	-	4	
Size of shops	sq.ft.	200	144	225	190	200	374	-	289	
Ave. time open	am	7:30	7:30	8:15	8:00	8:00	7:00	-	7:30	
Ave. time closed	pm	6:00	3:00	5:00	5:00	8:00	2:00	-	5:00	
Closed on Friday	%	50	100	100	83	100	100	-	100	
Ave. Employees/ Shop	no.	2	2	3	2.3	2	3.6	-	2.8	
Fulltime employees	%	100	100	50	83	100	100	-	100	
Operated by rela- tives	%	100	50	50	67	100	33	-	50	
Owner in Syndi- cate	%	0	50	100	50	100	100	-	100	
Refrigeration	%	100	100	100	100	100	100	-	100	
Display case	%	50	100	100	83	100	100	-	100	
Freezer	%	50	50	50	50	100	100	-	100	
Operator/owner	%	100	100	100	100	100	100	-	100	
Owner has other job	%	0	50	0	17	0	0	-	0	
Operator owns other shop	%	0	0	0	0	0	0	-	0	
Cleanliness of store		fair	good	good	good	poor	N.A.	N.A.	-	

sales of offals of cows and one shop sold dry groceries. In Aleppo, no beef shops interviewed sold other meat products besides beef. Sales of meat by income areas are listed in table 2.29. No, butcher shops in the high income areas of Aleppo were located. Beef is a product which is preferred by the middle and low income classes.

In the first quarter of the year, butcher shops in Aleppo reported average sales of 2,063 kg/month which was higher than shops in Damascus reported during the same period. Sales fell off during the second quarter in Aleppo which corresponds to increased availability of mutton (table 2.17). The amount of beef consumed in Aleppo is higher than in Damascus. In Damascus, sales of beef fell slightly from the first to the second quarter from 1,667 kg to 1,283 kg. per month. Availability of mutton in the market can explain the fall in consumption of beef. The retail shops in the higher income areas of Damascus did mention sales of other meat products (table 2.29). Quantities of these products were reported to fall between the first and second quarters.

Daily volume of sales of beef are estimated in Table 2.30. In Damascus, average daily sales progressively increased from low to high income areas. Average daily sales in Damascus was 48 kg/day. The days of the week with the highest sales were Thursday and Saturday, the days before religious observances. For the butcher shops interviewed in Aleppo, sales were highest Saturday and Sunday. Average daily sales were reported for the three shops at 42/kg day. For religious holidays, butchers in Damascus reported greatest sales during the feast of Adaha of 105 kg/day. Because of the higher Christian population in Aleppo, sales of beef were highest during Christmas and Easter.

Consumption of beef is higher in the Christian and Palestinian areas

Table 2.29. Monthly Sales of Meat in Retail Beef Shops in Damascus and Aleppo

Products	DAMASCUS								ALEPPO							
	Low Income		Middle Income		High Income		Total		Low Income		Middle Income		High Income		Total	
	1st Qtr.	2nd Qtr.	1st Qtr.	2nd Qtr.	1st Qtr.	2nd Qtr.	1st Qtr.	2nd Qtr.	1st Qtr.	2nd Qtr.	1st Qtr.	2nd Qtr.	1st Qtr.	2nd Qtr.	1st Qtr.	2nd Qtr.
----- kg/mo -----																
Beef	1,200	1,200	1,550	1,325	2,250	1,325	1,667	1,283	1,200	600	2,350	1,490	-	-	2,063	1,268
Offals	12	12	45	45	75	38	44	32	-	-	-	-	-	-	-	-
Mutton	-	-	-	-	300	150	100	50	-	-	-	-	-	-	-	-
Other <sup>a</sup>	-	-	-	-	450	375	150	125	-	-	-	-	-	-	-	-

<sup>a</sup>Bacon and preserved meat.

Table 2.30. Average Sales of Beef per Day and During Religious Festivities in Damascus and Aleppo

Sales/day	DAMASCUS				ALEPPO			
	Low Income	Middle Income	High Income	Total	Low Income	Middle Income	High Income	Total
----- (kg.) -----								
<u>Weekdays:</u>								
Sunday	27	52	37	39	N.A.	53	-	53
Monday	27	52	50	43	N.A.	35	-	35
Tuesday	27	52	63	47	N.A.	33	-	33
Wednesday	27	52	51	43	N.A.	35	-	35
Thursday	37	52	85	58	N.A.	33	-	33
Friday	37 <sup>a</sup>	-	-	37 <sup>a</sup>	N.A.	-	-	-
Saturday	27	52	85	55	N.A.	65	-	65
Ave. Daily Sales:	30	52	62	48	N.A.	42	-	42
<u>Festivities:</u>								
Rammadan	32	57	80	56	100	42	-	71
Adaha	32	57	225	105	100	42	-	71
Christmas	32	57	145	78	N.A.	90	-	90
Easter	32	57	150	80	N.A.	90	-	90
Ave. Sales per Customer/wk.	2.5	1.5	2	2	2	1.6	-	1.8

<sup>a</sup>One store was open on Friday.

of Damascus. Average purchases by customers per week was 2.5 kg, in low income areas, higher than in the high income areas. The same income characteristic was observed in Aleppo with average purchases per week of 2kg.

(iii). Wholesale Prices Paid and Retail Prices Received by Beef Butchers

Wholesale prices paid by butchers for beef are listed in table 2.31. A few butchers gave the price paid for live animals in Damascus, S.L.5.50 per kg., and then slaughtered themselves in the slaughter house. The price of dead weight carcass meat was reported to be S.L. 14.00 per kg by butchers in Damascus which seems higher than normal. Butchers in the slaughter house reported selling their carcasses to butchers at S.L.11.50kg. Butchers interviewed in the middle and high income areas of Damascus reported purchasing either pieces of carcasses or deboned red meat from private meat merchants. Average price was S.L.15.60 per kg. In Aleppo, beef butchers reported purchasing the carcasses for S.L.11.55, about the same price recorded by butchers at the slaughter house in Damascus. Several butchers in Damascus reported selling offals with an average purchase wholesale price of S.L.17.00. Only one or two butchers sold other meat products. Retail prices received for meat sold by beef butchers are listed in table 2.31. Prices for boneless red meat sold on the average for S.L. 17.83 per kg., higher than equivalent cuts of beef in Aleppo. Price for mixed beef with fat was lower in Damascus than Aleppo, S.L.12.00 versus S.L. 13.06. Retail prices for other meats sold in Damascus was similar to mutton shops. Boneless mutton was selling for S.L.25.00 per kg. in shops in high income areas.

Table 2.31. Wholesale Prices Paid for Meat by Beef Butchers and Prices Received for Meat in Damascus and Aleppo.

Product	DAMASCUS				ALEPPO			
	Low Income	Middle Income	High Income	Total	Low Income	Middle Income	High Income	Total
- - - - - (S.P./kg.) - - - - -								
<u>Wholesale Prices Paid:</u>								
<u>Beef:</u>								
Live Animal	5.50	-	-	5.50	-	-	-	-
Carcass Weight	14.00	-	-	14.00	11.50	11.60	-	11.55
Boneless Beef		15.25	16.00	15.60	-	-	-	-
Offals:	14.00	14.00	20.00	17.00	-	-	-	-
Mutton <sup>a</sup>			18.00	18.00	-	-	-	-
Other			15.00	15.00	-	-	-	-
<u>Retail Prices Received:</u>								
<u>Beef:</u>								
Boneless	16.50	17.00	20.00	17.83	15.00	15.30	-	15.23
Mixed	12.00	-	-	12.00	12.50	13.25	-	13.06
Fat	1.00	-	-	1.00	5.00	5.00	-	5.00
Offals:								
Mutton	-		25.00	25.00	-	-	-	-
Other	-		18.00	18.00	-	-	-	-

<sup>a</sup> Mutton purchased have been the best quality parts custom ordered.

(iv). Recorded Sales of Beef

To determine cost and returns to the butchers from their operations, butchers were asked to determine the dressing percentages and how he sells his carcass. In table 2.32, butchers in the survey, who purchased carcass meat, estimated that on the average 36% of their carcass was sold as boneless red meat and 27% was sold as beef mixed with fat. Approximately 25 - 27% of the carcass was reported as being bone and had no value while 10% was sold as fat. Because the bone is not sold with the meat, it must be considered as a loss to butchers and must be recovered in the sale of other parts of the carcass.

(v) Performance of Butcher Shops

Performance of the beef retail shops can be judged by estimating costs and returns to the firm. Based on the dressing percentages in table 2.32, average and gross net returns are estimated in table 2.33. The results are somewhat misleading indicating that the average beef butcher shops in Damascus and Aleppo have a monthly net loss of S.L. 629 and S.L. 4,596, respectively. The reason for this loss occurs from either the sale percentage of each carcasses or the price reported for the types of meat sold. Given the percentages of types of meat sold from each category (table 2.32), gross margin for the low income butchers in Damascus was a loss of S.L. 2994 per month. If these butchers are breaking even, they must have to sell boneless and mixed meat at higher prices than they reported. When butchers were asked to make a personal estimate of their monthly net profit the average reported was S.L. 2,515 in Damascus. Several butchers in the middle and high income areas reported paying fines last year for selling above government prices. The fines paid in

Table 2.32. Percentages of Beef Carcass Sold as Meat by Butchers in Damascus and Aleppo.

Product	Damascus	Aleppo	Total Average
- - - - - (%) - - - - -			
Boneless Red Meat	36	35	36
Meat with Fat	27	30	29
Bones	27	25	26
Fat	10	10	10

Source: Personal interview, March, 1979.

some cases exceeded S.L. 1,500 in 1978.

Beef butcher shops in the middle and high income areas in Damascus had monthly gross profits of L.S. 2,757 and L.S. 4,500 respectively, and net profits of L.S. 1,874 and L.S. 3,415. The reason for these groups of butchers to be making profits is that they purchase and sell deboned or parts of carcasses and do not suffer any loss from bones or fat in the carcasses. Butchers in these stores being supplied by private wholesale merchants can return meat which does not meet the satisfaction of the butchers.

In Aleppo, the four beef butchers interviewed had an average gross loss of L.S. 3,705 based on their reported percentages of sales of meat from carcasses and prices paid and received for meat (table 2.33). Butchers in Aleppo did not report selling other meat products as did butchers shops in the high income areas of Damascus. Butchers were asked to estimate their monthly net profit, and for the four butcher shops, they had an average net profit of L.S. 2,313 per month, with a high of LS. 4,500 and a low of L.S. 1,000 for the four shops. The wide descrepancy between the two estimates of net profit items from the fact that butchers were suspicious to speak with the researchers because of recent government investigations and fines. If what butchers estimate their percentages of the carcass sold as meat is assumed to be accurate, then butchers must have to sell above the government's control prices in order to stay in business.

(c) Government Retail Shops in Damascus

The General Consumption Institute in the Ministry of Supply owns and operates 10 meat shops and several supermarkets as sales outlets for meat in Damascus. Three of the ten meat shops were interviewed to serve as a

Table 2.33. Average Monthly Costs and Returns for Beef Butcher Shops  
Damascus and Aleppo

	DAMASCUS								ALEPPO							
	Low Income		Middle Income		High Income		Total Income		Low Income		Middle Income		High Income		Total Income	
	No.	Value	No.	Value	No.	Value	No.	Value	No.	Value	No.	Value	No.	Value	No.	Value
<u>Revenue:</u>																
Beef	2	15,198	2	26,350	2	45,000	6	26,258	1	14,650	3	30,478	-	-	4	26,815
Offals	1	528	1	1,350	1	3,300	3	1,726	-	-	-	-	-	-	-	-
Mutton	-	-	-	-	1	15,000	1	15,000	-	-	-	-	-	-	-	-
Other	-	-	-	-	1	8,100	1	8,100	-	-	-	-	-	-	-	-
Gross Revenue	2	15,462	2	27,025	2	54,150	6	30,971	1	15,047	3	30,478	-	-	4	26,815
<u>Costs:</u>																
Beef	2	18,288	2	23,638	2	36,000	6	25,975	1	17,400	3	34,892	-	-	4	30,520
Offals	1	336	1	1,260	1	3,000	3	1,532	-	-	-	-	-	-	-	-
Mutton	-	-	-	-	1	10,800	1	10,800	-	-	-	-	-	-	-	-
Other	-	-	-	-	2	6,750	2	6,750	-	-	-	-	-	-	-	-
Cost of Meat	2	18,456	2	24,268	2	49,650	6	30,791	1	17,400	3	34,892	-	-	4	30,520
Gross Return	2	(2,994)	2	2,757	2	4,500	6	180	1	-(2,353)	3	-(4,414)	-	-	4	-(3,705)
Overhead	2	161	2	308	2	510	2	326	1	208	3	959	-	-	4	771
Wages	2	-	2	575	2	575	2	483	1	-	3	160	-	-	4	120
Net Return	2	-(3,155)	2	1,874	2	3,415	6	-(629)	1	-(2,561)	3	-(5,533)	-	-	4	-(4,596)
Est. Net Return	1	1,547	2	1,022	2	4,492	5	2,515	1	(1,000)	3	2,750	-	-	4	2,313

comparison to the private butcher shops (table 2.34). The government shops were fairly standardized in their operation opening at 7am and closing at 2:30 pm. every day except Friday. Each shop had approximately 2 employees. Since most of the meat was prepacked one employee distributed the meat another collected the cash. All shops had modern facilities with average store size of 136 sq. ft. Two out of the three shops had display cases and all had a freezer. Operation was efficient and shops were in good and clean condition.

Unlike in the private shops, the number of employees were kept to a minimum. Labor requirements could be minimized since deboning of carcasses was done at the slaughter house. The government shops maintained a higher standard of sanitation than was witnessed in most shops in the private sector. Consumers seemed satisfied with the operation of meat shops with queues of customers waiting to receive meat in the mornings.

#### (ii) Recorded Sales

Government meat shops are the only retail meat outlets allowed to sell different types of meat products. Average monthly sales for the three meat shops was 19,890 kg. per shop which far exceeds the volume of sales in the private shops (table 2.35). Frozen mutton is sold only in government meat shops because government sets the price at lower than fresh mutton and wants to prevent mixing the two meats. Average monthly sales of beef in government shops approximately equals the average sales of beef in the private shops (table 2.29). Government meat shops also sell poultry and fish with average monthly sales of 3,000 kg. and 600 kg. of each product, respectively. In contrast to the private sector, government shops serve a larger number of customers per store offering a wider selection

Table 2.34. Characteristics of Government Meat Shops in Damascus

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Shops surveyed (no.)	3
Ave. size of shops (sq.ft.)	136
Ave. time shops open (a.m.)	7:00
Ave. time shops close (p.m.)	2:30
Shops closed on Friday (%)	100
Ave. employee/shop (no.)	2.5
Shops with refrigeration (%)	100
Shops with display case (%)	67
Shops with freezer (%)	100
Manager has other job (%)	0
Cleanliness of store (ave.)	good

---

Source: Personal Interview, March, 1979

Table 2.35. Average Monthly Sales of Meat Per shop from Government Meat Shops in Damascus

products	1 <sup>st</sup> Qtr.	2 <sup>nd</sup> Qtr.
	----- (kg/mo) -----	
mutton fresh	8,120	8,700
mutton frozen	5,600	6,000
beef	1,484	1,590
poultry	2,800	3,000
fish	560	600
total	18,564	19,890

Source: G.O.M.

of products. Unlike in the private shops, all meat sold is inspected for diseases. Government shops are able to maintain their advantage in market by receiving adequate supplies of meat, bought and sold at government control prices. Mutton butchers who need to supplement supplies of meat must buy from private merchants at a higher cost.

(iii) Wholesale and Retail Government Prices in Damascus

Government retail prices are set by the Supreme Agricultural Council after recommendations from the Ministry of Supply. In Damascus, wholesale and retail prices for meat are listed in table 2.36. The difference in the wholesale price between fresh mutton (local) and imported frozen mutton is L.S. 4.10/kg. Retail prices for the two types of products can vary at retail which the government prevents by sale of frozen mutton only in government stores. Boneless beef sells for approximately L.S. 5.50 less than boneless fresh mutton. In the private sector, retail prices for fresh mutton exceeded the government's controlled prices.

(iv) Performance of Government Retail Shops

Because of the large volume of sales and low overhead costs, the government shops operate more efficiently than the private shops. More customers are capable of being served because meat has been prepackage and weighed for some products so that service time is kept at a minimum. Some customers did complain about the odor of the pre-packaged mixed meat, but other than that, few complaints were expressed by store managers.

Average net profit for the ten government meat shops in Damascus was estimated at L.S. 160/day by the Meat Bureau. This places their average monthly net profit at higher than reported by private butchers in the high income areas of Damascus. The advantages of selling several

Table 2.36. Wholesale and Retail Prices for Meat from Government Shops in Damascus in March and April, 1979

Product	Wholesale Price	Retail Price
	----- (L.S./kg.) -----	
Fresh Mutton:	12.75	
Boneless		21.50
Bone-in		12.50
Fat		9.00
Thigh (hind)		17.00
Thigh (fore)		16.50
Other		15.50
Frozen Mutton (bone-in):	8.65	
Leg (hind)		12.00
Leg (fore)		11.00
Stomach area		5.50
Wholesale carcass		9.50
Beef:	11.00	
Boneless		16.00
Mixed (50/50)		10.00
Fish:		3.40
Poultry:		
Fresh	7.60	8.00
Frozen		7.50

Source: Meat Organization in Ministry of Supply.

products which have been packaged and weighed at a central location allows for increased customer satisfaction at lower operation costs than present in the private sector.

#### 2.2.4. Marketing Institutions

There seems to be a lack of marketing institutions which could improve the level of efficiency in the present marketing system for live-stock and meat. Where government has entered the marketing system, it has been to dominate and control rather than facilitate in the movement of products. The meat marketing system in Damascus is an example where government's control has lead to low levels of performance among the private retail sector and the rise in illegal slaughter of animals not inspected before human consumption.

The sheep fattening cooperatives which have over 3,000 members in 56 cooperatives in Syria find themselves at the disadvantage of selling in a monopsonistic market place. With no bargaining power by cooperatives, this has caused increases in illegal exports of fattened sheep. When the Meat Bureau becomes the single most important domestic purchaser, cooperatives have difficulty in receiving the highest price possible for their product. There is no marketing institution to serve the needs of private, cooperative, or government fattening operations to assist them in their business.

The Butcher's Association which is suppose to represent the interests of butchers is an ineffective organization which should be introducing measures to correct disadvantages placed on private retailers. The municipalities have the control over butchers through ordinances and regulations. The regulation of not allowing butchers to sell more than

one type of meat product restricts their volume of sales which forces shops to purchase uninspected carcasses from outside the government's control.

#### 2.2.5. Purchasing and Credit Facilities

The private merchants located in the larger urban centers in the sheep production regions of Syria had a cooperative agreement with Bedouins to raise sheep on share basis. The private merchant provides capital for purchasing animals, and bedouins are responsible for managing the animals. In the past, almost all sheep on the Steppe were owned by merchants. The milk, wool, and lambs would go to the merchant until the bedouin had paid for his share of the sheep. It is estimated that now, 70% of sheep in Steppe are owned by bedouins. The change in the structure has been because of easier credit being made to bedouins to purchase animals and not being dependent on private merchants. Government loans at low interest have become easier for producers. Better credit facilities have been made available for the sheep fattening cooperatives to purchase feed and lambs for their operations. Purchasing and credit facilities are not seen as a constraint in the marketing system for livestock and meat.

#### 2.2.6. Market Information Systems

The system for market information has not been developed in Syria placing the producer at a disadvantage in the market place. Producers have learned the basic understanding of using market facilities preferring not to sell livestock outside an organized market. Bedouins were reluctant to sell animals from their herds in the Steppe. The major markets, which lie on the northern and western boundary of the Steppe, become important trading centers for sheep from the Steepe.

Producers are at a disadvantage in these markets because they might trek long distances to sell a few head of livestock. Producers would rather have to sell their animals at a lower price rather than return home with them. Market information from these central markets to producers in the Steppe has not been developed.

Because of the constant trading between markets in the Northwest and the large centers for sheep fattening in Homs, Hama, and Aleppo, market prices between these markets normally vary only by cost of transportation. The fattening centers operate fairly efficiently in purchasing fattening lambs or yearlings at the lowest cost, either from domestic sources or imports.

Within a large market like Homs, Hama, or Aleppo, prices can vary in a given day depending on whether the Meat Bureau must purchase sheep on the open market for sale in Damascus. Producers, because they are dispersed in groups in the market, may not be able to obtain the latest price information, with buyers having to approach them through an intermediary. More competitive bidding with general price information facilitated by an auction market system could give producers a more equal bargaining position in the market place.

If the Damascus market was decontrolled and market information on prices of carcasses in Homs, Hama, and Aleppo was improved, private retail shops in Damascus could have another alternative in supply of mutton making the system more competitive. Wholesalers in Hama could deliver boneless lean mutton for LS18.75 per kg cost plus transport which still allows the butcher a return of LS2.75/kg based on government retail prices.

#### 2.2.7. Grades and Standards

In general, there is a lack of grades and standards of live-stock and meat products in the marketing system. In the livestock markets, producers do sell animals of the same breed, age, and sex which are for fattening or have been fattened. In Homs, Hama, and Aleppo, sellers and buyers would negotiate on an acceptable price per kilogram of live-weight for fattening sheep and then the group of animals would be weighed on a large weighscale. This practice could be the beginning of introducing an auction marketing system which requires standardization of live animals to facilitate in the exchange process.

An obvious lack of grades and standards has developed in the wholesale and retailing of meat when Damascus Government took control of the Damascus market in 1967. For three years, carcass meat sold by government to butchers was standardized and graded. After 1970, the system became cumbersome to handle and was disbanded. Now government distributes meat in Damascus allowing no carcasses to be graded on the premise that each butcher has an equal chance for a poor or good carcass. A major complaint by butchers was that they could not choose the quality and size of their carcass, and price was not differentiated according to grade. In the other urban consumption centers, this problem does not occur because butchers can choose their carcasses paying a premium on discount based on quality of the carcass.

#### 2.2.8. Degree of Competition

Degree of competition varies from stage to stage in the marketing system for livestock and meat. In the primary and secondary markets, competition is at its highest in buying and selling sheep. There are

many large and small fattening operations which compete for live animals. The export market in neighboring countries keeps the market competitive for producers to receive the best price for their animals. Because prices are competitive, the Meat Bureau in the Ministry of Supply has difficulty in purchasing live animals at prices which they can breakeven on in the Damascus market.

Government controls prices at retail and restricts supplies allowing only one meat product to be sold in a single shop. This policy generates excessive competition which lowers the efficiency in the operation of private shops. This has caused increases in the amount of illegal slaughters in Aleppo and Damascus where the government has entered some phases of the marketing system. In Damascus where government has complete control of slaughter, distribution and some retailing, uninspected carcasses illegally slaughtered sell above the government's price. Butchers buy from this source primarily because the government cannot supply their needs.

#### 2.2.9. Degree of Coordination

Coordination between stages in the marketing system has been allowed to develop to a limited extent only. Private sheep fattening operators are allowed to import, fatten, and then export 80% of their imports. Some butchers in Homs, Hama and Aleppo operated sheep fattening operations and wholesale deboned meat in Damascus, and retail meat in their own city. Coordination between merchants and bedouin herders in purchasing and managing sheep has been an important system in the past but has changed because of available credit to bedouins. Because of the increase in government control in segments of the marketing system, integration of several marketing activities has not benefited operational and pricing efficiency. In Damascus, private retail shops can only sell one type of

meat keeping volume low and sources of supplies limited. The retail sector loses because butchers could provide increased services at lower costs with increased coordination between wholesale merchants either in Damascus or in the meat surplus areas of Homs, Hama, and Aleppo.

### 2.3 Summary of Assessment

Performance of the marketing system for livestock-meat is good where enough firms are allowed to operate, to provide goods and services at the lowest cost possible. Where government agencies enter the market as monopolies, supplier inefficiencies are present with greater costs having to be absorbed by the general public. Production and fattening of sheep in Syria is an example of an industry which is highly competitive producing fattened animals at least cost with available technology. The number of operations owned either by producers, private, cooperative, or government are sufficient so that the industry operates competitively.

Because there are restrictions in the types of sheep exported and the number of registered export licenses, illegal trade of sheep is reported to be high to the Gulf States. Large profits have been accrued to a few individuals who have received licenses to import sheep for fattening and reexport. Because the government controls retail prices at the mohafazat level and restricts exports, price incentives are not being passed on to producers to improve local herds. Better quality animals, especially the Awasse breed, are being exported illegally to the benefit of neighboring countries. Producers are not given incentives to cull unproductive rams and ewes from the herd which has been a factor in the overgrazed condition of the Steepe. The government would rather airfreight

chilled carcasses from Romania and Bulgaria rather than allow prices for domestically produced livestock to increase. The country may suffer two loses; first, some net lose in foreign exchange for the purchase of imported meat not covered by sheep exports, second, the loss of livestock which are smuggled to the Gulf States, purchased at a lower market rate in Syria than would be the case if there were not imports of carcasses.

Market facilities are rudimentary but adequate. Producers prefer to sell in an organized market where they believe they obtain a better price. Further development of market facilities could enhance the operation leading to better market information and prices to producers. Market facilities provide few services to buyers or sellers to improve the efficiency of the exchange process. No major constraints exist in the transportation of livestock from markets to the final point of consumption. Internal transportation is readily available at reasonable rates set by the transport cooperatives. Transportation for the export of sheep is also available and not a problem.

For processing facilities, some of the slaughter plants are not maintained at sanitation levels for which they were designed. For the Damascus plant, which is operated by the municipality, the difficulty arises because two government agencies use the building and there is no overall managing director. This problem will be reduced when the government implements a proposed program of centralizing authroity in the operation of the plant.

Operational efficiency in the two modern slaughter plants of Damascus and Aleppo are low resulting in annual losses having to be absorbed by the government. Government's monopolizing of the market, either partial or total, have resulted in high marketing charges and poor services. Individuals who have benefited

are those merchants who have slaughtered illegally selling carcasses to butchers at prices higher than government controlled wholesale prices. Butchers pass these costs on by charging higher retail prices.

In the two large urban centers of Damascus and Aleppo, government's system of transporting carcasses is below sanitation standards with some basic health procedures not being followed. In Aleppo, delivery of carcasses is not reliable causing inconveniences to butchers. In Damascus carcasses could be handled in ways to minimize spoilage or contamination of meat. Simple procedures could be introduced at low cost to the overall operation.

Absence of grades and standards in the government controlled market of Damascus results in poor performance of the marketing system. Dis-satisfaction with the system by butchers has benefited the trade in illegal slaughter carcasses which further undermines government's services and facilities. Because government also restricts private meat shops from selling different meat products, butcher shops must either operate at a low volume of sale or transgress the ruling and sell different types of meat being subject to fines. Restricting types of meat sold, results in meat shops being less efficient having to pass the cost on to customers in the form of higher prices.

#### 2.4. Recommendations and Project Proposals for Improvement in Marketing and Related Structures

##### 2.4.1. Improvement in Marketing Facilities

In the major livestock areas of Homs, Hama, and Aleppo, livestock markets could be improved. Because of the volume in sales of sheep, auction facilities could be designed with holding pens to expedite the buying and selling of animals. Simple designed and low costs, facilities could

minimize the difficulty in herding animals and allow more competitive market conditions. Improved weighsscales could be introduced to encourage sale by liveweight. Alternative market facilities could be studied in countries with similiar production and management conditions like Syria. Any new market facility in Aleppo should be constructed near the slaughter plant to facilitate in transport of animals.

The second phase of project would be improvement of livestock market facilities in the smaller markets of Al Raqqah, Dier-ez-zor, and Al Hasakah. Improvement in the cattle markets could also begin during this phase of the project.

#### 2.4.2. Improvement in Marketing Institutions

##### Establishment of a Sheep Marketing Board

An agency such as a Sheep Marketing Board could be established to serve the interest of producers who are involved in sheep production and marketing. The Board could be designed to represent the interest of private and cooperative fattening operations. The Board would undertake the following responsibilities:

1. To collect, analyze and communicate marketing news through organized channels on domestic prices for sheep and meat, prices in neighboring export counties, volume of sales (daily, weekly or monthly), and other information necessary to facilitate marketing activities.
2. To advise government on changes in costs of production to keep the purchase price of the Meat Bureau in line with production costs and export prices.
3. To advise government on quantities of imported frozen and chilled carcasses which could depress domestic prices for fattened sheep and force increased illegal exports of live animals.
4. To advise government on import and export policies affecting the sheep industry. The Board would represent

exporters to determining number of licenses and quantity to be exported. The Board would assist in negotiating export contracts.

5. To assist the industry by doing market research to improve its efficiency and performance. A research proposal for the Board would be to analyze the benefits to the industry in exporting chilled or frozen carcasses rather than live animals.

The Board could be designed based on examples of commodity marketing boards in other countries. A few of the basic principles would be:

1. Members of the Board of Directors would have representatives from private sectors, cooperatives, and government proportional to its members in the industry.
2. There would not be more than 15 members on the Board of Directors, and members would revolve every two to three years.
3. The Sheep Marketing Board could be funded by a tax paid on fattened sheep sold by producers.
4. The funds would be used to pay salaries for a full-time managing director and staff of employees. Operating and overhead expenses for maintaining a head office in Aleppo would be paid from the fund.

The Board would be designed as a service organization to the industry and would not take possession of any livestock. (An alternative recommendation was made to the authors. This recommendation was a Meat Board consisting of members of all segments of the industry and including consumer representatives. It would produce data and information and provide overall coordination.)

#### Expanding Responsibilities of the Butchers Associations

It is recommended that the Butchers Associations be given more control in supervising and servicing its members. Upgrading of services could be encouraged in the following areas.

1. Monitor standards in distribution and sale of meat in urban areas to improve sanitation and handling of meat.
2. Encourage the use of grades and standards in the wholesale of meat products. The Association could be allowed to represent butchers in negotiations where the Meat Organization controls slaughter and distribution to enact price differentials by quality of carcasses.

3. Register all butchers who operate in a mohafazat and enforce the sale of inspected meat.
4. Represent members in negotiations with local mohafazat administrations to allow butchers to expand the numbers of meat products sold by an individual shop.
5. Encourage cooperative arrangement among groups of butchers to operate as a single facility selling several types of meat products. This would reduce the excessive competitiveness currently in the urban market.

Modifications in Operating Procedures of Meat Bureau in Ministry of Supply

The Meat Bureau, as an established marketing institution, could improve the meat distribution system by introducing simple changes in pricing premiums and discounts based on grade and yield of their carcasses. Butchers would be allowed a choice in type of meat needed rather than random quality in delivered products. Unless the service of the Meat Bureau can be substantially improved consideration should be given to turning distribution back to the private trade.

2.4.3. Improvement in Processing Facilities

Construction of Slaughter Plants in Homs and Hama

Modern slaughter facilities in Homs and Hama are needed to properly service these expanding urban areas. Slaughter plants in each city could be based on the design of the Aleppo plant which unlike Damascus has retaining pens for animals as they enter the killing floor. These additions would help minimize danger, particularly of cattle injuring employees.

Size of the slaughter plants in each city should be based on daily local consumption plus possible expansion of slaughter of sheep for shipment to Damascus and for export. Cold storage capacity would be sufficient to handle carcasses which might be transported to the Gulf States.

Location of the new slaughter plants is important and should be easily accessible to the livestock market in each city. This encourages use of the plant by merchants who otherwise might slaughter in their homes.

Improvement in Slaughter Facilities in Aleppo and Damascus

Sanitation and handling procedures could be easily improved at low cost. Investment in cleaning detergents with stricter hygienic conditions should be required by each municipality. These requirements should also be applied in the transportation of meat from slaughter house to butcher shops. Improvement in the transport vehicles servicing the Aleppo market need upgrading to alleviate chronic breakdowns.

New strategies by each municipality for increasing utilization of available slaughter capacity should be investigated. Private merchants who are currently slaughtering illegally in Damascus should be given incentives to use the slaughter plant. The municipality could make arrangements to do slaughtering for private sectors as well as for the Meat Bureau charging a fee that covers cost of operation. This will help to minimize the heavy losses in the Damascus plant. In Aleppo, there should be stricter enforcement in the sale of uninspected carcasses by the municipality. This will increase the supply of sheep utilizing unused capacity at the plant.

If all methods fail to restrict illegal slaughter and to encourage private sector to use municipal slaughter plants alternative private slaughter plants which operate under state inspection could be allowed. The meat business is complex requiring decentralized decision making and the best operated meat business are run by the private sector. Even cooperatives have not been very successful in meat slaughter and distribution except in Scandinavian countries.

A Feasibility Study of the Wool Scouring Plant in Hama

Preliminary analysis indicates that the scouring plant in Hama is operating below expected performance and producing a product which is of inferior quality compared to production from the private sector. A feasibility study to judge the performance of the plant is recommended. Alternative strategies should be investigated in how to operate the plant to produce a quality product which could be economically used in Syria.

A possibility in the assessment would be to estimate the economic feasibility of importing greasy wool from New Zealand or Australia. This wool could be blended with Syrian wool and scoured at the Hama plant to produce a product with good top-to-yarn yield which could be spun for thread for the local textile mills. There are examples of countries which employ this marketing procedure to supply their local industry. With Syria's current imports of tops and yarn from West Europe, this project would help to reduce expensive imports and make the Hama plant a more viable operation.

### 3. Assessment and Recommendations for the Poultry and Egg Subsector

#### 3.1. Description of the Subsector

The poultry industry in Syria has grown rapidly in recent years.

By the Spring of 1979, the industry has reached self-sufficiency in egg production and is approaching self-sufficiency in meat production.

Current egg production in Syria is between 800-900 million eggs per year.

The General Organization for Poultry (GOP) estimated broiler production was between 21-22 million birds in 1978 which GOP estimated below demand requirements given prices of broiler, beef, and mutton meat.

On February 26, 1974 the GOP in the Ministry of Agriculture was established to assume full responsibility for the development of the poultry industry, both private and public sectors. Its ultimate objective was to achieve self-sufficiency in poultry meat and egg production. Since that time substantial investments have been made in both the public and private sectors. In 1978-79 capacity was still being added in both broilers and eggs.

The GOP has nine production units either under construction or in operation. Each operation is supposed to supply the needs of the surrounding region with minimal transportation of products to other regions. One government official estimated total production of eggs from the GOP's operations at 100 million eggs in 1979 and expects production to be 200 million in 1980. The public sector has been estimated to be producing 9 percent of the eggs and 28 percent of the chickens. In 1978/79 there were an estimated 289 commercial egg producers and 655 broiler producers. There are three large commercial hatcheries supplying the

private sector. The GOP will begin construction in 1979 of hatcheries in Damas, and Homs, and Aleppo to produce layer parent stock and day old broiler chicks. Hatcheries should be operational by 1982 producing 72,000 layer parent stock per year and 12.8 million broiler chicks. Layer and broiler chicks will be distributed to government and private operations.

Growth in the poultry industry has been made possible by growth in the feed industry. Only the government's General Organization of Feed can import feedstuffs and minerals for feed rations. Poultry feed is sold either by government or by private mills who mix the feed ration bought from government. There were about 40 small private mills that sold 35% of their volume as poultry feed and 65% as feed for cattle and sheep. Sheep feeding utilized the largest share of government feed mills and poultry feed the smallest, also.

A thorough study of the Syrian poultry industry was made by Experience Incorporated of Minneapolis, Minnesota in November, 1976. At that time they reported a shortage of broilers at the official price because the private retail stores visited (September, 1976) had not been able to purchase sufficient quantities. In the meantime expansion took place and the General Consumption Institute followed a policy of importing frozen broilers to hold down the price of sheep meat. Despite the increase in official prices of beef and sheep meat, increased output of poultry meat has kept increases in official retail prices for dressed poultry to a minimum of 2.5% from 1976 to 1979 (table 3.1). Government retail egg prices have seen a higher percentage jump in prices (table 3.1).

Table 3.1. Official Prices for Eggs, Broilers and Red Meat in Damascus, 1976 and 1979.

Item	Sept. 1976	March 1979	Percentage Increases 1976 - 1979
<b>Broilers</b>			
Retail broilers, dressed	7.80	8.00	2.5
Retail broilers, live	-	5.50	-
Retail beef, red meat	10.50	16.00	52.3
Retail mutton, red meat	17.00	20.50	20.6
<b>Eggs</b>			
Retail 53 gr. or less (S.L./egg)	.20	.275 <sup>a</sup>	27.3
Retail 53-60 gr. (S.L./egg)	.23	.30 <sup>b</sup>	23.3
Retail 60 gr. and over (S.L./egg)	.25	.325 <sup>c</sup>	23.1

a. The March, 1979 price is for eggs less than 51 grams.

b. The March, 1979 price is for eggs between 51-57 grams.

c. The March, 1979 prices is for eggs 58 grams and over.

### 3.2 Assessment of Marketing System for Poultry and Eggs

#### 3.2.1. Transport Network and Flows of Poultry and Eggs

##### Domestic Production

Domestic production of poultry and eggs are not transported long distances in Syria with production units located near the larger urban consumption areas. For the large poultry project in Sednaiya, the government has one truck for transporting chickens to the poultry slaughter plant in Damascus. The truck has a capacity of 3,500 chickens and usually makes two trips per day carrying chickens.

In assessing the transportation system for poultry and eggs, no constraints seem present to limit the operational efficiency of the system. Transportation is available and usually provided by the wholesaler who distributes poultry meat and eggs to retail shops. Small Suzuki trucks are used mainly by wholesalers to distribute poultry meat and eggs in the urban areas.

##### Imports of Poultry and Eggs

Imports of frozen chickens by the Meat Bureau of G.C.I. for the years of 1976 to 1978 are listed in table 3.2. In 1978, 2,500 metric tons (m.t.) were imported at an average cost of \$1,128/m.t. cost plus freight (c&f). Import duty is 4% of the value. Frozen chickens are landed in Tartous or Latakia and then transported to Damas in refrigerated trucks. Trucks are either from the Ministry of Supply or rented from private sectors. Transportation rates were quoted at S.L. .22/kg/km if trucks are able to backhaul on the return trip; otherwise, the price is double. Source of imports is the Baltic countries of

Table 3.2. Imports of Frozen Chicken by Meat Bureau, 1976-1978.

Year	Qtr.	Quantity m.t.	Value \$/m.t.	Import Duty \$/m.t.
1976	2	1,000	1,175	47
	2	600	1,250	50
1977	4	100	1,250	50
1978	1	500	1,170	47
	3	1,000	1,015	41
	4	1,000	1,220	49
1979	2	500	1,200	48

Source: Files of Meat Organization, April 1979.

Romania or Bulgaria as well as South America. The Meat Bureau also has on order 500 m.t. of frozen chicken from Bulgaria in 1979 which will be delivered by refrigerated trucks. No bottlenecks seen present in distribution system.

### 3.2.2 Processing Facilities

#### Poultry Hatcheries

There are 5 to 6 private hatcheries in Damascus which distribute day old chicks. The government project at Sednaiya also distributes chicks but mainly to supply its own farms. If surplus occurs, the farm will sell day old chicks to private operations. Production cost of day old chicks at Sednaiya was estimated at S.L. 1.10 per chick. For the private sector, the full cost of production of day old broiler chicks from local parent stock was estimated at S.L. 1.35 assuming an 80% yield in hatched eggs. If hatching eggs are imported, then cost of production of a broiler chick was estimated to increase to L.S. 1.50 based on a 80% yield in eggs. The hatcheries distribute day old layer chicks which are imported. One hatchery, which imports day old layer chicks from Lebanon, pays L.S. 2.85 per chick cost plus transport to Damascus.

The net profit on each chick is estimated at 5% for imported day old layer chicks by a private hatchery in Damascus. Day old layer chicks retail for L.S. 3.00. For broiler chicks, net profit was estimated at 19% for broiler chicks produced from local parent stock. Net profit from day old broiler chicks from imported eggs drops to 6.7%.

Private hatcheries also mix poultry ration from ingredients purchased from General Organization of Feed (GOF). Mixed feed for broilers was sold for S.L. 1,250 per metric ton (m.t.), F.O.B. Damascus. The mixed feed is sold in 50 kg. bags. Premixed broiler feed bought from GOF costs L.S. 1,150/m.t. The government's price is slightly less than the costs of private hatcheries. Hatcheries are competitive and try to operate as efficiently as possible given constraints on supplies of feed and its quality which must be purchased from the government's GOF. Hatchery operators complained that quality of feed is not reliable which is one reason why private firms are able to sell their own mixed ration from government's input supplies. Private hatcheries are realizing a favorable return on investment of 19% in locally produced day old broiler chicks which is an encouragement for further expansion in the hatching industry. With the growth of the public sector to construct three large hatcheries by 1982, this margin of profit will be reduced. The private hatcheries also provide excellent marketing services to private customers. The hatchery has free delivery of day old chicks directly to a producer's farm being responsible for any mortalities in chicks while in transport.

#### Poultry Slaughter Plants

Most of the poultry slaughtered and dressed are done in private slaughter facilities. In Damascus, there are an estimated 15 private slaughter plants for poultry. Private merchants contract with broiler producers to purchase their broilers. These private merchants have their own transport and take delivery of the poultry at the producer's

farm. In table 3.3, the marketing margin for broiler meat is estimated from farm gate to wholesale. Cost of broiler production in Damascus mohafazat was estimated at S.L. 4.90/kg. Poultry producer realized a 33% on his investment. Net return to private merchant who purchases, slaughters, and transports dressed carcass meat was estimated at 9.5% return on his investment. The value of the marketing margin between the farm gate and wholesale is 26% with 68% of the marketing margin being the cost of slaughter. The middlemen who slaughter and wholesale dressed poultry make a 10% rate of return which is not excessive. The middlemen play an important role in facilitating marketing processes efficiently and at a reasonable cost.

In the public sector, the government has a poultry slaughter plant in Damascus. The plant was designed to receive supplies from the large poultry farm at Sednaiya, and GOP is responsible for managing the plant. The poultry slaughter plant was constructed in 1973 but was not operational until 1976. The plant operates from 7 a.m. to 10 a.m. everyday. The plant has the capacity to slaughter 1,000 chickens per hour. Poultry arrive in plastic cases holding 12 birds per case.

The poultry plant received 3,000-5,000 broilers per day during the months of March and April. There are 44 employees at the plant, 24 laborers and 20 routine workers in administration, with average monthly salaries of S.L. 600. Since supplies are dependent on the GOP's government farm, the plant capacity is not utilized. Marketing margins for poultry processed through the GOP plant is compared with the private slaughter houses in Damascus (table 3.3). The margin is higher

Table 3.3 Marketing Margin for Dressed Poultry in Damascus, April, 1979

	Private Merchant		Government Slaughter Plant	
	Value L.S./kg. - - -	Percent % - - -	Value L.S./kg. - - -	Percent % - - -
Cost to Produce Broiler of 1,300 gr. liveweight	4.90		5.10	
Farm Price of Live Broiler weighing 1,300gr.	6.50		5.10	
Net Profit to Producer	1.60	33		
Slaughter Cost of live bird weighing 1,300 gr.	1.17		1.65	
Transportation to store	.30			
Wholesale cost/kg liveweight	7.97		6.75	
Average Wholesale Price per kg. dressed carcass	8.20		7.50	
Marketing margin of broiler meat	1.70	26	2.40	47
Sale of Offals	.53		.53	
Revenue from Sale of Chicken	8.73		8.03	
Net Margin of Profit to Wholesale Merchant	.76	9.5	1.28	19

in the processing plant with a 47% price differential between the farm price and the price of processed poultry with 68% of the margin being from the cost of slaughter. For an 8 hour shift, the plant is utilizing 38% of its available capacity. Unlike the private slaughter facilities in Damascus, GOP does not deliver dressed chickens to retail outlets.

A government administrator estimated average daily consumption in Damascus of 18,000 chickens. Consumption during the winter falls to 12,000-15,000 chickens per day and rises to 25,000 chickens per day during the summer. The majority of processed chickens are supplied by the private sector while the government maintains a plant which has a larger capacity but is underutilized. The GOP's plant could not compete with private processors for poultry from private farms because of their high slaughter costs. The plant would have to charge a wholesale price at the plant higher than the government's controlled retail price.

### 3.2.3. Marketing Facilities

#### Distribution and Wholesaling Facilities (a) Poultry Marketing

The private sector has the major responsibility for delivery of live and dressed poultry. The facilities are low cost operations with a large number of small firms involved in the trade. Restaurants are a major market for dressed poultry and require daily delivery of chickens. A dispersed marketing system could handle the necessary flows for major urban markets like Damascus and Aleppo. The distribution and wholesaling facilities can be described as efficient and low cost. Only one draw-back in the system is that sanitation conditions under which poultry are slaughtered and transported are lacking. One reason costs are low is

that facilities are kept simple with low overheads.

(b) Egg Marketing Facilities

Many of the middlemen who wholesale and distribute dressed poultry also handle eggs. Average cost of production for eggs in Syria is estimated in table 3.4. The government has seven grades for eggs and given an average weight of 60 grams for an egg, average F.O.B. farm price was S.L. .249/egg. Wholesaler takes delivery of eggs from the poultry farm. Based on survey of poultry retail shops, wholesale price of eggs in Damascus was S.L. .279/egg in March, 1979. The wholesalers margin on each egg is an average of S.L. .03/egg which is a gross margin of 10.7% of the wholesale price. The return to the wholesaler would be less when cost of transportation and overhead costs are paid for. The distribution and wholesaling of eggs seems efficient and competitive with a reasonable rate of return to the wholesaler. The middlemen are providing a useful and adequate service at reasonable costs.

Retail Shops for Poultry and Eggs (a) Description of Poultry Retail Shops

Poultry retail shops were surveyed in Damascus and Aleppo. In Damascus, five shops were surveyed distributed across income areas while in Aleppo only two shops were interviewed in the middle income area. Characteristics of the shops is detailed in table 3.5. Poultry shops operated on the average 12 hours per day, and most shops were open seven days per week. Many of the shops sold dressed or roasted chickens and customers were dropping in to purchase food. Shops interviewed in both cities were small, efficiently run operations. Because

Table 3.4. Marketing Margin for Eggs from Farm Gate to Wholesale  
in Damascus, March 1979.

	<u>Value</u> S.L./kg.
production cost	.215
F.O.B. farm price	
egg $\leq$ 50 gr. weight	.216
egg = 60 gr. weight	.227
egg $\geq$ 70 gr. weight	.305
Average F.O.B. farm price	.249
Average Wholesale Price <sup>a</sup>	.279
Marketing Margin	.03
Marketing Margin as % Wholesale price (%)	10.7

a. Average wholesale price determined from survey of poultry  
retail shops in Damascus.

Table 3.5. Characteristics of Private Poultry Shops in Damascus and Aleppo, March, 1979

	DAMASCUS				ALEPPO	
	Low Income	Middle Income	High Income	Total	Middle Income	Total
Shops surveyed (no.)	2	1	2	5	2	2
Size of shops (sq.ft.)	407	N.A.	360	385	169	169
Ave. time shops open(a.m.)	8:00	8:00	8:00	8:00	8:30	8:30
Ave. time shops close(p.m.)	8:00	10:00	6:30	8:00	8:00	8:00
Shops open everyday(%)	50	100	100	80	50	50
Ave. no of Employees/shop	1.5	2	3.5	2.3	3	3
Shops with fulltime employees (5)	100	100	100	100	50	50
Shops operated by relatives (%)	100	100	50	80	50	50
Owner of shop in society (%)	0	100	50	40	0	0
Shops with refrigeration	100	100	100	100	100	100
Shops with display case (%)	100	0	100	80	100	100
Shops with freezer	0	100	100	100	100	100
Shops with Operator/owner	100	100	100	100	100	100
Owner has other job	100	0	50	20	0	0
Operator owns other shop (%)	100	0	50	20	0	0
Cleanliness of store	good	good	fair <sup>+</sup>	good	good	good

of the turnover in inventory, many shops did not have freezers but did have refrigerated display cases so customers could choose their dressed chickens. As in the mutton and beef retail shops, shops are managed and owned by the same individual.

(b) Record of Sales

Operators were asked to estimate their average monthly sales of poultry products sold in the first and second quarter of each year (table 3.6). Average sales of dressed chicken was higher in the second quarter for Damascus shops. Consumption of poultry is reported to increase during the spring and summer months. Sales of dressed poultry was highest in the high income areas of Damascus. Because only two shops were interviewed in Aleppo, it is difficult to make general statements about the city. Average sales of dressed poultry was 1,500 kg each month which is higher than the average sales for similar products of mutton and beef in retail shops in Damascus.

Each retail shop in Damascus reported selling eggs. Average monthly sales per shop was 304 dozen, higher than reported sales of one shop selling eggs in Aleppo. In several shops, owners reported buying their eggs and chickens from the same wholesaler. Only two shops reported selling offals in Damascus, and offals constituted a small percentage of monthly sales.

Daily sales of poultry was highest on Fridays in Damascus (table 3.7) corresponding to the weekly holiday when there would be more purchasers of roasted chicken. In Aleppo, shops reported significant increases in sales on Thursday and Saturday. Some increase was observed on Friday.

Table 3.6. Monthly Sales of Poultry and Eggs in Retail Shops in Damascus and Aleppo,  
March, 1979

Products	DAMASCUS								ALEPPO			
	Low Income		Middle Income		High Income		Total		Middle Income		Total	
	1st Qtr.	2nd Qtr.	1st Qtr.	2nd Qtr.	1st Qtr.	2nd Qtr.	1st Qtr.	2nd Qtr.	1st Qtr.	2nd Qtr.	1st Qtr.	2nd Qtr.
POULTRY	753	753	600	600	1,650	2,250	1,081	1,321	1,500	1,500	1,500	1,500
EGGS (doz.)	460	460	120	120	240	240	304	304	167	167	167	167
OFFALS (kg.)	80	80	24	24	-	-	37	37	-	-	-	-

Table 3.7. Average Sales of Poultry per day and during Religious Festivities in Damascus and Aleppo, March, 1979

Sales/Day	DAMASCUS				ALEPPO	
	Low Income	Middle Income	High Income	Total	Middle Income	Total
<u>Weekdays</u>						
Sunday	10	17	55	31	23	23
Monday	10	17	55	31	23	23
Tuesday	10	17	55	31	25	25
Wednesday	10	17	55	31	25	25
Thursday	10	17	55	35	50	50
Friday	10	45	55	35	30	30
Saturday	10	17	55	31	50	50
Ave. Daily Sales	10	21	55	32	32	32
<u>Festivities:</u>						
Rammadan	-	8	85	59	140	140
Adaha	-	48	115	93	65	65
Christmas	-	25	90	68	65	65
Easter	-	25	90	68	50	50
Sales/customer/wk.	-	-	3	3	N.A.	N.A.

Source: Personal Interview, March, 1979.

Average daily sales per shop was 32 kg., the same for Damascus and Aleppo. Sales of poultry was reported to increase with greatest increase occurring during the festival of Adaha in Damascus; sales were observed to increase most during the Rammadan festivities.

(c) Wholesale and Retail Prices for Poultry Products

Retail shops reported buying live and slaughtered poultry. There are poultry shops which sell live birds so the customer can choose his chicken. These shops were mostly located in the low income areas of Damascus. Dressed poultry were sold per kg. with the visceral and intestine being sold to different specialty retail shops. Wholesale and retail prices are subject to supply and demand conditions for a particular period. Wholesale and retail prices for live chickens for Damascus and Aleppo are listed in table 3.9. The marketing margin was slightly higher in Damascus for every year reported except 1970. Retail price for roasted chickens were approximately the same in both cities. Shops seem to be adhering to government controlled prices for this item. Retail prices for dressed poultry were approximately equal between the two cities. The marketing margin for Aleppo shops was higher with a margin of S.L. .87/kg of dressed poultry sold.

Wholesale and retail prices for eggs for the year of 1970 and the period of 1974-1978 are listed in table 3.10. The marketing margin in 1978 was lower in Damascus which could be explained by the production farms, government and private, supplying the Damascus urban area. It is likely that in 1979, the marketing margin will be reduced in Aleppo with increased production from the new government farm in Zurbeh. The marketing

Table 3.8. Wholesale Prices Paid for Meat by Mutton Butchers and Prices for Meat in Damascus and Aleppo

	DAMASCUS												ALEPPO					
	Low Income			Middle Income			High Income			Total Shops			Middle Income			Total Income		
	Live	Slau	Other	Live	Slau	Other	Live	Slau	Other	Live	Slau	Other	Live	Slau	Other	Live	Slau	Other
<u>Wholesale Prices Paid</u>																		
Poultry (S.L./kg.)	5.10	8.50	-	8.50	-	6.60	7.60	-	5.75	8.05	-	6.50	7.68	-	6.50	7.68	-	
Eggs (S.L./doz.)	-	-	3.23	-	-	3.40	-	-	3.50	-	-	3.37	-	-	3.60	-	-	
Offals (S.L./kg.)	-	-	11.00	-	-	10.00	-	-	-	-	-	10.50	-	-	-	-	-	
<u>Retail Prices Received</u>																		
Poultry (S.L./kg.)	5.50	8.50	14.00 <sup>a</sup>	-	-	9.50 <sup>a</sup>	-	8.00	10.85 <sup>a</sup>	5.50	8.25	11.45 <sup>a</sup>	-	8.55	12.00	-	8.55	12.00 <sup>a</sup>
Eggs (S.L./doz.)	-	-	3.40	-	-	3.60	-	-	3.75	-	-	3.61	-	-	4.20	-	-	
Offals (S.L./kg.)	-	-	12.00	-	-	11.00	-	-	-	-	-	11.50	-	-	-	-	-	

<sup>a</sup>Sales price for roasted chicken

Table 3.9. Wholesale and Retail Prices and Marketing Margins for Live Poultry in Damascus and Aleppo for Selected Years.

Year	DAMASCUS			ALEPPO		
	Wholesale	Retail	Margin	Wholesale	Retail	Margin
	(S.L./kg.)					
1970	2.94	3.18	.24	2.78	3.16	.38
1974	6.02	6.55	.53	5.73	5.95	.26
1975	5.93	6.40	.47	5.60	5.95	.35
1976	6.00	6.65	.65	6.20	6.53	.33
1977	6.63	7.12	.49	6.70	7.10	.40
1978	-	-	-	-	-	-

Source: Central Bureau of Statistics, 1978.

Table 3.10. Wholesale and Retail Prices and Marketing Margins for Eggs in Damascus and Aleppo for Selected Years

Year	DAMASCUS			ALEPPO		
	Wholesale	Retail	Margin	Wholesale	Retail	Margin
1970	1.68	1.90	.22	1.68	1.90	.22
1974	2.99	3.26	.28	2.94	3.38	.44
1975	2.70	3.12	.42	2.78	3.18	.40
1976	3.00	3.50	.50	2.88	3.31	.43
1977	3.83	4.31	.48	3.50	4.00	.49
1978	3.37	3.58	.21	3.60	4.20	.60

Source: Central Bureau of Statistics, 1978.

margin reported by private poultry shops for eggs was S.L. 24/dozen in Damascus which is S.L. .03/dozen higher than the reported price spread in 1978 (table 3.10). The gross margin on each egg is extremely low, S.L. .02, which is slightly above the government's official marketing margin of @.L. .015/egg at retail. The price spread for Aleppo between wholesale and retail was S.L. .60 per dozen which was the same spread in 1978 which is a gross margin of 14%.

(d) Performance of Retail Poultry Shops

Performance of poultry retail shops in Damascus and Aleppo is high. Shops have adequate supplies of products reporting high volume of sales with low overheads. The shops were owner operated and services seemed adequate. Examining the financial balance sheet for an average month of operation, average net profit on total sales was 23% in Damascus and 21% in Aleppo (table 3.11). Because retail shops are low overhead operations with no butchering of poultry, costs are kept to a minimum. Since there is little government intervention in the distribution and wholesale stage of the industry, wholesalers are competitive in providing low cost products. Because of the fluctuations in supply, it is likely that net profits will decline when there are surplus poultry products in the market.

#### 3.2.4. Marketing Institutions

There are two institutions involved in the marketing of poultry products, General Organization for Poultry (GOP) in the Ministry of Agriculture and the General Consumption Institute (GCI) in the Ministry of Supply.

Table 3.11. Monthly Financial Balance Sheet for Poultry Retail Shops in  
Damascus and Aleppo, March, 1979

	DAMASCUS								ALEPPO			
	Low Income		Middle Income		High Income		Total Shops		Middle Income		Total Shops	
	Shops	Value S.L./mo.	Shops	Value S.L./mo.	Shops	Value S.L./mo.	Shops	Value S.L./mo.	Shops	Value S.L./mo.	Shops	Value S.L./mo.
<b>Revenue from Sales:</b>												
Poultry	2	8,471	1	5,700	2	15,551	5	10,464	2	14,550	2	14,550
Eggs	2	1,564	1	432	2	900	5	1,072	1	701	1	701
Offals	1	960	1	264	2	0	2	612	2	0	2	0
Monthly Revenue	2	10,515	1	6,396	2	16,451	5	11,781	2	14,901	2	14,901
<b>Costs:</b>												
Products	2	7,046	1	5,748	2	12,060	5	8,537	2	11,520	2	11,520
Overhead	2	294	1	115	2	599	5	380	2	282	2	282
Wages	2	0	1	0	1	680	5	136	2	0	2	0
Monthly Costs	2	7,340	1	5,863	2	12,999	5	9,053	2	11,802	2	11,802
Net Return/month	2	3,175	1	533	2	3,453	5	2,727	2	3,099	2	3,099

of Supply. Both institutions are government agencies. GOP is in control of the government poultry farms and the slaughter house in Damascus. The GOP has not developed a marketing system for their products. Emphasis of GOP has been on increasing production with little foresight given to how products could be best distributed. Given supplies of poultry and eggs from the private sector in Aleppo, the government's farm at Zurbeh is likely to flood the Aleppo market. Prices for products will decline necessitating efforts by government to become aware of marketing strategies to remain competitive in the marketplace. By the end of 1979, Zurbeh will reach 80% capacity, marketing 800,000 broilers and 36 million eggs annually. Officials at Zurbeh, when asked how these products would be marketed, were not sure, only that plans would be developed. A slaughter plant in Aleppo, like the one in Damascus, is proposed.

G.C.I. markets poultry and eggs through their Meat Bureau and sells products in their meat shops and supermarkets. GCI has a total of 100 department stores in Syria with at least one department store in each city and two in each mohafazat. As described in table 3.2, G.C.I. imports frozen chickens which sell at a government controlled price which is less than the price of local poultry. G.C.I. buys from GOP farms to supply its requirements for chilled poultry and eggs. G.C.I. has cold storage facilities outside Damascus for keeping frozen imports to offset any shortages in the market place. Operating distribution, wholesale, and retail facilities, G.C.I. is actively involved in providing marketing functions. G.C.I. performance is rated higher in their marketing efficiency for poultry and eggs, probably because of the few services required.

In the private sector, each stage of the marketing system can be described as being a dispersed market except for marketing of day old chicks. There are three large hatcheries in Syria that service the needs of the private sector. From all information, they are conducting business competitively. With government's plans to construct three new hatcheries in Syria and also serve private firms this will narrow the profit margins for privately owned hatcheries.

### 3.2.5. Purchase and Credit Facilities

Because of the large number of private firms at all stages in the poultry industry, purchase and credit facilities are not viewed as a constraint on the operational efficiency of the marketing system. There seems to be easy entry into poultry marketing, except at hatchery level, to insure pricing efficiency at each level in the industry.

### 3.2.6. Market Information Systems

Very little market information is readily available to participants in the marketing system. If the government was to promote more market information services, decision-making by private individuals would be better. Since at each stage of the marketing system, there are many firms, efficient operation is dependent on easily accessible information on cost of inputs and product prices. Retail outlets must rely on word-of-mouth in determining the best price possible.

### 3.2.7. Grades and Standards

Compared to the livestock-meat industry, grades and standards for poultry eggs are utilized more in the marketing system. The government

has seven grades for classification of eggs with the major determinate being weight of eggs. The government's official marketing margin of S.L. .025 per egg or 8% (retail S.L. .015 and wholesale S.L. .01/egg) is extremely low and provides no possibilities for services such as refrigeration, candling and further grading. In retail poultry shops, eggs were neither refrigerated reducing their shelf life nor cleaned or packaged, increasing breakage.

### 3.2.8. Degree of Competition

Degree of competition is high in poultry and egg marketing with easy access to entry into the market place. With government's increased expansion in the production of poultry and eggs, profit margins will narrow with probably smaller firms in the industry having difficulty to survive. In the Damascus market, there are 15 private merchants who slaughter and wholesale dressed poultry in addition to the GOP's wholesaling of poultry from the slaughter house. Competition is adequate to keep prices in line with supply and demand conditions of the market.

### 3.2.9. Degree of Coordination

There is only some vertical coordination in the marketing system for poultry products. Some private merchants in Damascus who purchase and slaughter live broilers also have a retail outlet for their processed product. There is no evidence that broiler or egg producers have facilities to process their product. The large hatcheries have expanded into mixing poultry feed from ingredients purchased from the General Organization for Feed (GOF), but they have not expanded into production of meat or eggs. Even the government has assigned two separate

institutions, one to produce and the other to market poultry and eggs. An obvious lack of coordination has occurred preventing any increased efficiencies to occur through the marketing system.

### 3.3 Summary of Assessment

The marketing system for poultry and eggs seems to be performing well. The consumer has a variety of alternatives including direct home delivery of chickens and eggs by the producer. Many specialized chicken restaurants are available and fresh domestic or frozen imported birds can be purchased in private or government stores.

Poultry meat and eggs are priced well below red meats. The price differential between poultry, mutton and beef has increased since 1976 indicating that expansion in the poultry industry with appropriate technology has kept retail prices from rising. For the period of the next 5 year plan (1981-1985), the prospects are that beef and lamb prices will be at record highs throughout the Middle East. Much of the growth in animal protein will need to come in poultry production.

The official marketing margin for eggs is extremely low and provides no possibility for services such as refrigeration, candling and further grading. Little effort by wholesalers or retailers is made to market a clean, packaged product. Eggs are not refrigerated which lessens their shelf life.

Operational efficiency is present at each stage of the marketing system. At the retail level, average monthly net profit for stores in Damascus is S.L. 2,727 which is a 23% return on sales which is higher than what was estimated for private beef and mutton retail shops. If

cost efficiencies are to occur in the future, then more coordination between stages in the marketing system will evolve. With government's GOP planning to increase hatchery capacity and general production of meat and eggs, it is likely that the inefficient operator will be squeezed out of business.

The government's poultry slaughter house is only partially utilizing its available capacity. The facility is clean and modern, but GOP is unable to purchase poultry from the private sector because their wholesale price would increase. Private slaughter facilities supply approximately 80% of the broiler meat consumed in Damascus daily. Alternative strategies should be researched to utilize more of the available capacity.

As an input to the poultry industry, feedstuffs have been the key to expansion. Private poultry producers complain though that quality of feed input received from government's (GOF) is not always reliable. This is why some private feed mix sell their own premixed ration from ingredients purchased from the government.

### 3.4 Recommendations for Improvement of Marketing Systems for Poultry and Eggs

Additional government investment in poultry production capacity is not likely to be needed for the next 5 year plan if it is clear to the private sector that they will be allowed to make a reasonable return on investment. In the next 5 year plan more emphasis needs to be given to marketing and processing facilities.

### 3.4.1. Marketing Institutions

In the next 5 year plan, production of poultry meat and eggs will require marketing strategies to insure efficient distribution of products. If present policies are continued with government being a poultry producer and competitor in poultry and feed, there is a likelihood that the government poultry industry will lose money throughout much of the period.

Because of a reluctance to raise prices to cover costs, it may cause losses among private firms who must make a profit to survive. Any future government production farms should conduct a market survey study to determine how products will reach consumers at lowest cost. In a project, such as the size of Zurbeh, production will likely cause surpluses in Aleppo which will require marketing studies on distribution of products to other deficit regions. No marketing contingency studies have been undertaken. GOP should emphasize development of its existing marketing department to design marketing alternatives for government production.

Government's GOP has not developed linkages with the private sector because of organization difficulties. At Sednaiya, government personnel said that private individuals were willing to purchase supplies of broilers and day old chicks from the farm but the farm found it more difficult to coordinate these sales, preferring to supply government's institutions only. More coordination between GOP and the private sector could be developed in the next 5 year plan.

### 3.4.2. Government Pricing Policies.

It is recommended that price controls on poultry meat and eggs be removed. There are a large number of competitors with relatively free

entry and expansion. With government as the largest single producer and a large number of relatively small competitors this should be adequate protection for consumers. Additional protection for consumers can easily be maintained by keeping import restrictions low.

### 3.4.3. Poultry Processing Facilities

GOP's slaughter house in Damascus is using only a portion of its available capacity. The plant is slaughtering only 20% of the city's daily consumption. Efforts should be made to encourage rise of the plant by the private sector. Cooperative or partnership agreements could be designed between GOP and private slaughter houses in Damascus. If the government is unable to increase their utilization of the plant's available capacity, the government could lease the facility to private firms on a sealed bid basis for five year periods and allow the plant to be operated by the private sector.

There is a processing facility for making feed ration from the discarded parts of the chicken. With greater utilization of the poultry plant capacity, there would be more feed ration available. The discarded parts of chicken in the private sector have no way to be economically utilized. The feather processing plant needs to be made operational again. If these processing facilities from the chicken's by-products are not economical for the government, then plans to lease them to the private sector should be encouraged.

#### 4. Assessment and Recommendations for Dairy Marketing

##### 4.1 Description of Industry

The majority of the milk produced and marketed is controlled by the private sector. Approximately only 2.6% of cow's milk produced in 1977 was from state farms (Census Bureau of Statistic, 1978). From 1973 to 1977 the rate of increase in production of cows milk has averaged 17.1% annually (table 4.1). From 1976 to 1977, milk production increased by approximately 9.0%. Production of sheep's milk reached an all time high of 285,000 m.t. in 1976 but declined in 1977 by 16%. Production of sheep milk is going to be highly dependent on forage conditions in a particular year.

Consumption of processed milk also reached an all time high in 1976 but fell off in 1977 by 2.7%. Only fresh milk consumption has increased each year from 1973 to 1977. The value of milk and milk products in constant 1963 prices had a noticeable increase in 1976 but declined slightly in 1977.

Milk production in Syria has been assisted by the UNICEF in established dairy plants which can process local milk with imported milk powders to bottle sterilized milk. The Syrian government with assistance from World Food Program operate three dairy plants in Damascus, Homs, and Aleppo. The dairy plants do not handle sheep's milk which is processed mainly into yoghurt cheese, or ghee. All processing of sheep's milk is by manual methods.

In an overview of prices for milk and dairy products, regional prices for the center of each Mohafazat is given in table 4.2. Marketing margins for dairy products were relatively low. Many sales are direct from farmer

to consumer. Retail prices and wholesale to retail marketing margins varied over Mohafazats and for the same Mohafazat over time (table 4.2). Examination of these data suggest a very market oriented industry. These data have the same variability over geographic areas and over time that one would expect for a market system without price controls. Marketing margins are lowest on milk and fresh yoghurt and highest on cheese. The variability in wholesale/retail price spreads over time is an example of the response to supply and demand conditions of a competitive marketing system.

A thorough study of the feasibility for increased dairy production was conducted by the German Agency for Technical Cooperation, LTD in 1978. Syria was estimated to remain a deficit milk production country at least until 1988 even with an infusion of 10,000 imported heifers. Total milk production in 1983 and 1988 was estimated to be 777 and 900 thousand tons until 1983 and 1988, respectively, given natural growth rates. The study estimated that Syria would have to import 504 thousand tons in 1983 and 855 thousand tons of milk products in 1988 to satisfy domestic consumption requirements. The study does indicate that local production will be increasing constantly which will place increased pressure on the current marketing system and processing facilities (German Agency for Technical Cooperation, p. 86).

#### 4.2 Assessment of Marketing System for Dairy Products

##### 4.2.1 Transportation Network and Flows of Milk and Dairy Products

### Domestic Production

The marketing system for domestic production of sheep's milk is in the form of yoghurt, ghee, or cheese. Private merchants purchase directly from producers and supply the urban areas. The marketing system in dairy products from sheep's milk has developed over many years with the relationship between private merchants and bedouins on the Steppe. Dairy products from the Steppe are still marketed in this manner. If the bedouin is living within one days travel to an urban area, he will sell milk or yoghurt. If the herder lives a distance of 2 to 3 days travel time from an urban area, he likely will market cheese. If over three days, the herder will prepare and sell ghee. The system would be different if the private merchant picks up dairy products with a vehicle.

In the Damascus market area, private merchants operate as middlemen visiting private dairy farms twice per day to collect producers' milk. These middlemen transport the milk to town to sell to merchants who make yoghurt or sell fresh milk. It was estimated by a government official that the Damascus dairy plant receives only 20% of the area's milk production. A major barrier to increasing the plant's market share is lack of proper container vehicles to pick-up producers' milk. Because many producers are small operators, the plant would not find it economic to visit each producer. The lack of on-farm storage coolers or central collection centers is an obvious barrier preventing competitiveness by the dairy plant. The same problems are affecting the dairy plant in Aleppo in being able to compete with the private sector for supplies of fresh milk.

### Imports of Dairy Product

The trade balance of Syria in dairy products has been negative and steadily increasing each year since 1971 (table 4.3). In 1977, the negative trade balance was S.L. 206 million. After cereals and cereal preparations, dairy imports had the largest negative trade balance of any other food commodity imported. Imports of dairy products was only 4.3% of total domestic production in 1978. The reason for the high value of imports is that these are processed dairy products, butter and cheese.

The Syrian Arab Dairy Company imports powdered skim and whole milk for their three processing plants. This company is supposed to be the only importer of whole powdered milk, of which 1,200 m.t. was for the Damascus 2,700 m.t. of powdered skim milk, of which 1,200 m.t. was for the Damascus plant. The Damascus dairy plant also purchased 1,000 m.t. of whole powdered milk. The powdered skim milk are shipments from the United Nation's World Food Program in 1978 while the powdered whole milk was bought on the commercial market. In 1978, 200 m.t. of butter were imported for processing ghee in the dairy plants in Damascus and Homs.

#### 4.2.2. Processing Facilities

The only processing facilities are operated by the government owned Syrian Arab Dairy Company. Construction on the plants began in 1963 and operation began in 1970. Each plant has the capacity to process 30 tons daily of fresh milk into sterilized milk. Currently the Damascus plant is receiving 18-22 tons per day. The plant receives 66% of its fresh milk from government or cooperative dairy farms in the Damascus area. About 34% comes from the private sector. The plant manager estimated that they

receive only 20% of the total production in the area.

In Aleppo, the dairy plant is utilizing even less of its available capacity. Daily supplies of fresh milk were reported at 7.5 tons with close to 50% being received from the government farm at Zurbeh. The plant was reported to have a net loss in 1978 of S.L. 300,000. The difficulty the plant had was purchasing supplies of fresh milk from the private sector at prices which were withingthe guidelines set by the government.

In evaluating the peformance of the Damascus dairy plant, financial balance sheets for 1977 and 1978 were developed (table 4.4). The Damascus dairy plant had significant increases in profit from S.L. 2.60 million in 1977 to S.L. 2.71 million in 1978, an increase of 4.4%. The major reason for the dramatic increase in profits was from the sales of ghee and butter. Sales of yoghurt and white cheese showed a decline because of poor consumer acceptance of these products reported by plant management. The plant is currently undertaking research with the University of Damascus to try and improve the taste of their white cheese. A profit rate of 12.2% in 1978 is very high for this type of plant, especially when the plant management complains that wages are extremely low causing excessive turn-overs in employment.

The plant manager complained that transport vehicles used to distribute products in the city were old and needed replacement; yet, much of the profits which the plant realized in 1978 were not funded back into the plant's operation. The management reported spending up to S.L. 200,000 on vehicle maintence in 1978, and there have not been any replacemnts. Majority of the plant's profits are being used for dairy production.

#### 4.2.3. Marketing Facilities

In assessing marketing facilities, neither the private nor public sectors have adequate facilities for collecting, distributing, wholesaling and retailing dairy products. In the private sector, there are many middlemen who handle small volume of products. There is little modern technology present tailored to the needs of the small operator. Simple, low cost technology has not been available for collecting and cooling milk. The dairy plant complains that acidity levels sometimes exceed 17% in milk, especially during the summer months, lowering the quality of their dairy products.

Distribution of dairy products from the dairy plants have created barriers in competing with the private sector. In Damascus, vehicles are not reliable and the delivery system has been slow. At the Aleppo plant, the plant was unable to service their customers adequately. Retail store owners had to arrange for their own delivery system and still sell at government controlled prices. With a competitive private sector, the dairy plant has difficulty providing a quality product with marketing services. Private merchants are willing to provide services to assure contract deliveries from dairy producers.

#### 4.2.4. Marketing Institutions

One difficulty occurring in the dairy marketing system is the lack of coordination between the two institutions involved with the dairy industry. The Ministry of Agriculture is responsible for production while dairy delivery systems and processing are under the Ministry of

Industry. The General Organization for Food Industries (GOFI) in the Ministry of Industry supervises processing and marketing. GOFI is responsible for 17 other food processing sub-industries. As it was reported that net profits were not being reinvested in dairy plants operations, profits are likely being used in other areas, like dairy production. Very few changes in the marketing system have (occured) in the public sector which have left the plants at a disadvantage in competing with private merchants for supplies of fresh milk.

#### 4.2.5. Purchasing and Credit Facilities

It has been reported that private merchants who purchase the fresh milk from producers provide credit facilities. This service allows middle-  
ment to develop contracts with groups of buyers making it difficult for the dairy plant to purchase supplies from the private sector. The dairy plants must rely on the government or cooperative dairy farms for their supplies. It was not determined whether the credit arrangement by middle-  
ment were exploiting the small dairy producer. It would be healthy to allow producers other alternatives for credit through government loans.

#### 4.2.6. Market Information Systems

There is very little market information services available for dairy producers, especially since much of the dairy transactions are done on the producer's farm. Private producers are generally small volume operators, at a disadvantage in the marketing system as an individual sellers. Improvement in market news services could help in the bargaining position of

producers. Organized collection centers for producers with small volume could allow an alternative marketing system.

#### 4.2.7. Grades and Standards

Few grades and standards are followed in the private sector. It was reported that because of improper cooling facilities, the dairy plant was receiving milk with too high an acidity level. If the dairy plants were to become a major purchaser in the private sector they would have to design standards for butter fat content and level of acidity. The use of collection centers for fresh milk could help administer appropriate grades and standards.

#### 4.2.8. Degree of Competition

The dairy marketing system is highly competitive in the private sector. The degree of competition places government plants at a disadvantage in being unable to compete for supplies either in prices or services rendered. In 1977, the price spread for fresh milk in Damascus between the wholesale and retail levels was 11.5% (table 4.2). This does not seem to be an excessive margin implying competition in the market is keeping prices in line with costs.

#### 4.2.9. Degree of Coordination

Coordination in the marketing system is observed between the private merchants and Bedouin herders in arranging supplies of dairy products for sale in urban markets. The dairy plant being the sole purchaser of milk

produced on government dairy farms is another marketing system linking production directly to processing. The output of milk from the government dairy farms is a small fraction of national production, less than 10%. The coordination in purchasing arrangements by private merchants with individual milk producers have been effective in developing contracts for milk supplies over a time period. If the government processing plants are to capture a larger market share, their efforts to provide additional services and coordinate delivery with medium to long run supply contracts will be necessary.

#### 4.3 Summary of Assessment

Dairy marketing in Syria is chiefly in the hands of the private sector. Cheese, yoghurt and ghee are the major dairy products with the majority manufactured manually. The government does operate three dairy processing plants managed by the Syrian Arab Dairy Company. The dairy plant has been unable to compete effectively to obtain supplies of fresh milk from the private sector. The Damascus dairy plant receives only 20% of the milk produced in the Mohafaza of Damascus.

The distribution system for dairy products is grossly lacking. The majority of fresh milk is collected in small containers on the farm with little use of bulk carriers. On farm cooling systems are not available requiring daily visits, sometimes twice per day, to an individual farm. This system could be made more efficient and quality probably improved.

Government dairy plants are using vehicles which have been operating since 1963. Vehicle maintenance costs are exorbitant causing delays in

delivery and low marketing performance. Profits from the plant's operation have not been reinvested in the plant for new machinery and equipment. The processing plants experienced difficulty in daily delivery of sterilized milk to central distribution stores causing bottlenecks in the marketing system. Empty bottles must be returned by the plant's trucks so they can be reused for sterilized milk. Even the level of technical skills in the dairy plants are low because salaries have not been increased. There is a high turnover in employment even though the plant made a large net profit in 1978.

Little effort has been made to modernize the dairy marketing system. Emphasis has been placed on production. The dairy plants have sufficient plant capacity that is not being used. Orderly marketing of milk and dairy products should be a major concern of the next five year plan. Requirements can be met with appropriate technology and management at low cost to the industry.

#### 4.4 Recommendations for Improvement of Marketing System for Dairy Products.

##### 4.4.1. Marketing Facilities

###### Collection Centers and Cooling Facilities for Fresh Milk.

Because many of the private producers are small operators, a system of centrally located collection centers for fresh milk would be a method for reducing the number of visits to individual farms. Both in the Damascus and Aleppo plants, management complained of difficulty to compete in obtaining supplies of fresh milk. The plant did not have the facilities to make regular visits to each producer. Collection centers would be able

to grade the milk paying premium prices for quality milk while keeping milk cool until pick-up by the plant. Even low cost technology is available for an on-farm cooling of milk until pick-up by the plant. This would enhance the bargaining position of dairy producers. Currently the marketing system does not seem to be operating at least cost.

#### 4.4.2. Processing Facilities

##### Damascus Dairy Plant

With large profits realized in 1978 by the plant, reinvestment in the operation would be advised in upgrading their vehicles. With over S.L. 200,000 spent annually in vehicle servicing, high costs of maintenance could be reduced. Motor vehicles for delivery of milk are recommended for service of distribution centers in the city. The plant has only four trucks, and not all are operating at one time.

Improvement in product design and quality is necessary in making yoghurt and white cheese. The plant recently designed new containers for merchandising their yoghurt, which is smaller than their 5kg bucket. Continued research is suggested in design, processing and packaging of white cheese which had a decline of 13% in value of sales from 1977 to 1978. To improve their marketability of milk products, the plant could design milk dispensers for sale of milk to schools and other institutions. Improvement in marketing strategies are necessary if the plant is to compete with the private sector.

Aleppo Dairy Plant

Many of the same difficulties faced by Damascus plant is experienced in the Aleppo plant. Market penetration by the plant has been more difficult because of the highly competitive private sector. In the Aleppo market, there are supplies of sheep's milk which customers prefer in making yoghurt. It is recommended that market research be conducted in product design to determine how the plant can present a more acceptable product. Selling yoghurt in smaller and easy to handle containers should also be introduced at the Aleppo plant. Improvement in the plant's distribution system needs modernizing just as in Damascus.

Table 4.1. Value and Production of Milk and Dairy Products in Syria, 1971-1977<sup>a</sup>

Year	Milk Production			Milk Products Produced				Value of Milk and products at constant 1963 prices	
	Goats - - - (1000 m.t.)-	Sheep	Cows	Butter	Cheese (m.t.)- - - - -	Ghee	fresh milk (1000 m.t.)- - - - -	Milk - - - (million S.L.)	
1971	53	188	199	2,045	27,758	5,530	157	441	201.5
1972	48	223	187	1,353	26,640	7,836	141	458	177.8
1973	40	173	179	1,092	24,084	2,166	134	394	177.5
1974	52	235	212	1,269	25,832	7,993	176	500	167.7
1975	53	250	263	1,283	29,862	8,911	200	567	172.7
1976	72	285	307	1,083	34,550	9,180	245	665	194.7
1977	71	240	335	839	30,160	7,586	253	647	187.9

Source: Central Bureau of Statistics, 1978.

Table 4.2 Prices and Price Spreads for Dairy Products by Mohafazat, Animal Average, 1977

Mohafazat	Retail	Wholesale	Retail	Wholesale	Retail	Wholesale
	Piasters/kg.	difference (%)	Piasters/kg.	difference (%)	Piasters/kg.	Retail difference (%)
Damascus	130	11.5	145	8.3	700	15.7
Aleppo	132	9.1	165	18.2	750	13.3
Homs	112	8.9	133	15.0	614	10.4
Hama	112	11.6	133	6.0	644	6.8
Tortous	106	12.3	115	8.7	634	9.3
Lattikia	100	5.0	120	12.5	693	12.2
Idleb	121	10.7	160	12.5	642	10.7
Al Rakka	108	5.5	158	16.5	645	15.5
Deir-es-Zor	96	8.3	123	8.1	692	27.7
Al Hasakeh	125	-	134	7.5	622	5
Sweida	120	4.2	125	8.0	625	4.3
Dara	116	5.2	123	8.9	638	11.8

Year		Prices and Price Spreads for Damascus by years.				
1977	130	11.5	145	8.3	700	15.7
1976	120	16.7	142	12.0	665	22.6
1975	100	10.0	125	8.0	663	32.1
1974	95	10.5	110	10.9	477	8.2
1973	83	14.5	96	9.4	417	8.1
1972	69	-	91	-	374	-
1971	68	-	84	-	379	-
1970	59	-	72	-	305	-

Source: CS - 1978

Table 4.3. Imports and Balance of Trade of Dairy Products in Syria,  
1970-1977.

Year	Value of Imports <sup>a</sup> ('000 S.L.)	Imports as Percentage of Domestic Production %	Trade Balance <sup>a</sup> ('000 S.L.)
1970	24,821	1.8	-22,151
1971	54,366	3.4	-53,569
1972	56,175	3.4	-54,185
1973	76,817	4.4	-75,823
1974	94,602	3.2	-93,665
1975	103,878	2.0	-102,292
1976	180,746	3.2	-178,861
1977	207,936	4.3	-206,124

a. Trade statistics included egg imports in the total.

Table 4.4. Financial Analyses of Dairy Plants in Damascus, 1977 and 1978

	1977		1978		% Increase in Value 1977/78
	Qty. (tons)	Value (S.L. '000)	Qty. (tons)	Value S.L. '000)	
<b>Sales:</b>					
Sterilized milk	2,470	2,964	2,580	3,250	9.7
Yogurt	6,050	5,445	5,317	4,998	-9.9
Concentrated dry Yogurt	450	1,620	421	1,680	3.7
White cheese	350	1,260	228	1,095	-13.1
Butter oil (ghee)	800	5,800	908	7,143	23.2
Butter	155	976	590	4,108	20.9
Total Revenue <sup>a</sup>		17,356		22,274	28.3
<b>Costs:</b>					
Raw materials		12,061		16,229	34.5
Auxillary materials		81		90	11.1
Packing materials		432		619	43.2
Energy and fuel		217		338	55.7
Other (interest, ins.)		568		446	-21.5
Sub-total		13,315		17,722	33.0
Salaries and wages		1,100		1,353	23.0
Depreciation		345		488	41.5
Total Costs		14,760		19,563	32.5
Net Profit		2,596		2,711	4.4
Profit on Sales (%)		15.0		12.2	-18.7
Gross Margin (%) <sup>b</sup>		23.3		20.4	-12.5

<sup>a</sup>Value of product at the plant.

<sup>b</sup>Calculated as sales minus cost of raw materials.

##### 5. Appendix: Design of Survey for Retail Meat Shops in Damascus and Aleppo

With assistance from the Meat Bureau in the General Consumption Institute, a list of butchers being supplied mutton from the slaughter house was provided for Damascus. The names of six mutton butchers and three alternates were randomly selected from the lists of butchers in low, middle and high income areas. A letter of introduction was prepared by the managing director of G.C.I. informing the butchers of the visit by a survey team. Poultry and retail shops were also selected randomly by stopping at a shop that was located in the vicinity of a mutton retailer. Two poultry and beef retail shops were selected for each income area.

Interviews were conducted at each retail shop. The researcher was accompanied only by an interpreter and no representative was present from either the Meat Bureau or Butchers Association. It was found that presence of a government representative made respondents extremely suspicious.

In Aleppo, retail shops were selected at random by driving in different income areas. Because the retail of meat is uncontrolled, unlike Damascus, butchers were reluctant in several instances to be interviewed. Only where personal acquaintance between interpreter and butchers occurred was suspicion minimized. Fewer butcher shops were surveyed in Aleppo because of the difficulty with cooperation from butchers.

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