MARKET STUDY OF POULTRY PRODUCTS IN THE GAMBIA

by

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and

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April 1994

Acknowledgements

The consultants wish to thank staff members of the Department of Livestock Services and the Central Statistics Department for the data they provided. We are particularly grateful to Dr B. N. Touray, Director of Livestock Services, who was the main source of professional counsel at the commencement of the study.

We very much appreciate the outstanding cooperation of the local poultry farmers and traders who were most willing to share with us useful information on their activities.

None of the above should be held responsible for the opinions here or possible errors that may remain

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Introduction

This report is the result of a two-week study of the supply and demand of poultry products, i.e. chicken meat and table eggs in The Gambia, with a focus on Greater Banjul. The study included a survey of commercial poultry farms, importers and distributors of poultry products (including supermarkets), hotels, wholesalers (who are not also importers), and retailers.

A total of 33 entities constitute the sample for this study (see Annex 1). These include 10 commercial poultry farmers (9 large and 1 small), 12 importers (5 supermarkets, 3 hotels, 3 traders and 1 general food wholesaler), 1 supermarket (as a non-importing wholesaler), 3 "tourist" hotels (non-importers), 2 restaurants (including 1 that caters mainly for tourists), 1 tourist ground operator and 4 retailers.

The other data set used in this study was information collected from government sources, including the Department of Livestock Services and the Central Statistics Department.

Methodology

Entrepreneurs are generally reluctant to give precise and complete data on their operations. In order to reduce this information problem, the data that was collected from each entrepreneur at the head of the supply channel (i.e. local producers and importers) was checked with their customers and with other entrepreneurs in the same business. Additional information was also collected from those customers. This process was continued through the supply chain of the products.

The "case study" approach (via lengthy interviews following a general outline), which encouraged interviewees to be much more forthcoming in their responses, was used instead of structured questionnaires. This approach was found particularly useful with interviewees that were not well known to the researchers as it reduced suspicion amongst them as to the purposes of collecting the information.

The list of importers of poultry products and the schedule of local poultry farmers (as of 1993) were obtained from the Ministry of Trade and the Department of Livestock Services, respectively. However, the Ministry of Trade, which compiles data on all imports into the country, was unable to provide figures for the importation of eggs for the years 1992 and 1993. Therefore, the researchers used information provided by the Department of Livestock Services to verify the data that was collected from the importers. The import figures from the Department were compiled from attachments to the copies of "Certificate(s) of Health Clearance" that were issued by the its Veterinary Public Health Officers at the time of importation of the products.

Demand

Estimates of the level of consumption of chicken meat and table eggs by households in The Gambia have been arrived at using two sources, namely, the Grobar Study (1988) and the Central Statistics Department's Price Survey Report (1992/93). The base figures that were extracted from the two sources are discussed in detail in Appendix 1 of this report.

Projections of the level of consumption of chicken meat and eggs vary according to the two different sources: the figures range from 834,000 (using the CSD base figures) and 3,600,000 (using the Grobar base figures) for chickens; and, from 10,347,000 to 20,400,000 for eggs, respectively. However, as noted in Appendix 1, Grobar's study was restricted to Banjul/Kombo St. Mary's Division, where incomes are much higher than in rural areas. Therefore, extending the base figures from that source to the entire country may be misleading. Therefore, the discussions will be limited to only Greater Banjul[1], which includes all of Grobar's survey area, and in which all of the major poultry farms are located.

Estimates for the level of consumption for households in Greater Banjul in 1993, range from 552,600 (CSD) to 1,275,480 (Grobar) for chicken and from 7,227,720 (Grobar) to 9,114,000 (CSD) for eggs. While the figure arrived at using Grobar's base estimate for chicken appear high, that for eggs may be too low. This is due, in part, to the fact that consumption patterns may have changed since the survey was conducted.[2] For the purposes of this study, the estimates arrived at using the CSD base figures of 1.52 chickens and 25 eggs per capita per year[3] will be used, thus

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[1]Greater Banjul is the area comprising Banjul and Kanifing Local Government Areas, Kombo North district and a part of Kombo South district of Brikama Area.

[2]As will be seen later in this report, the price of egg has held steady over the period 1998 to 1993, while that for chicken has increased, in nominal terms. The per capita consumption of eggs may therefore have risen, while that of chicken may have fallen.

[3]The equivalent per capita figure of 25 eggs/year is low, perhaps the figure for broiler meat is also low, compared to the average consumption in other African countries. This may be due to the fact that the per capita income of $260 in The Gambia is much lower than that of $340 for other Sub-Saharan African countries as a whole (World Bank 1992, 218, 285), while prices of eggs tend to be comparable to the average prices elsewhere.

arriving at totals of 552,600 chickens and 9,114,000 eggs for the households in the Greater Banjul Area in 1993.

Apart from households, tourists visiting The Gambia also consume poultry products. Except for one relatively small hotel, all of the tourist hotels are located in Greater Banjul. Total consumption of chicken meat and table eggs by tourists is estimated at 177,500 chickens and 2,218,750 eggs for the year 1993 (see Appendix 2 for details). If we are to add these figures to those for the households, then we arrive at figures of 731,000 and 11,332,750 for the total number of chickens and eggs, respectively, consumed in Greater Banjul in 1993; say 730,000 chickens and 11,332,000 eggs. These figures are equivalent to 72 per-cent and 90 per-cent of the total for The Gambia for chickens and eggs, respectively.

The demand for chicken meat and table eggs by hotels, mainly for tourists, had in the past been of a seasonal nature. Only few hotels operated during the "off-season", and those that operated during that period did so with very low occupancy rates. That situation has now changed as more hotels are operating year-round, at the same time that the occupancy rates have been increasing. Thus, the marked seasonality in the demand for poultry products by the hotels has been very much reduced in the recent past, although a much higher proportion of the products (62.5% of the total) is still consumed during the "peak" period of the tourist season, which lasts from October/November to March/April of the following year.

While the levels of consumption of chicken meat and eggs by households do not appear to vary by season, the demand for them is much higher during Christmas and on Muslim feast days.

Although the supply of poultry products is discussed in detail in the following section, two points are worthy of note. Firstly, that hoteliers prefer smaller chickens (ranging from 0.9 kilogram to 1.1 kilograms) which are supplied almost exclusively through the import channels, while households prefer heavier chickens (live ones are preferred for muslim feast days) which are supplied mainly by local poultry farmers. Secondly, except for one hotel which imports white eggs (for the "table") and another that buys small quantities of imported eggs (purchased locally) the demand for eggs by the hotel industry is met in full by the local poultry farms. Imported eggs are consumed only by households who are indifferent to the origin of the product.[4]

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[4]The retail price is generally the same for both imported and locally produced eggs. However, imported eggs, which have a relatively high spoilage rate, are sold at slightly lower prices during the very few periods that the market is saturated with eggs.

Supply

The poultry products consumed by households and tourists to The Gambia are supplied by two sources, namely local poultry farmers and importers (mainly traders). Each of these two sources is discussed in detail below.

1) Local Poultry Farms

As of December 1993, 56 commercial farms were registered with the Department of Livestock Services. However, the number of commercial farms in the country appears to exceed that figure as a number of farms not included in the register were encountered during the survey for this study. In addition to commercial farms, there is a large number of traditional "backyard" farms, although the chicken population in those farms is believed to be small.[5]

8 of the registered farms are large (each with a population greater than 1,000 chickens). Two of them produce only chicken meat, 2 produce only eggs and the remaining 4 farms produce both chicken meat and eggs.

Almost all of the other 48 registered farms are reported to produce only eggs. This large number of farms is explained by the fact that egg production does not require refrigeration facilities for their operations. Refrigeration facilities, which are so vital to chicken storage production are limited in the country.

The local poultry farmers are also engaged in selling their products. However, they are normally not able to conclude firm advance contracts for the supply of the products with the hotels/restaurants and supermarkets, to which they sell on wholesale basis. The lack of firm supply contracts necessarily makes it difficult for the farmer to plan ahead, particularly for chicken meat and farmers without adequate refrigeration facilities are therefore compelled to keep mature birds alive until a buyer is found.

a) Chicken

Almost all of the chicken meat produced by the farms in Greater Banjul is consumed in the area. The local poultry farms produced an estimated 398,430 chickens for meat, including "spent layers", or 55 per-cent of the total consumed in Greater Banjul. Just over 59 per-cent of the total for the local poultry farms,

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[5]The most recent figures are available in the "Livestock Sector Survey", 1991. In that survey, the figure was estimated at 106,543, as of March 1991.

equivalent to 236,250 chickens, were produced by the 6 large commercial farms. The "traditional" farms produced fewer than 20,000 chickens (Livestock Sector Review 1991), or almost 5 per-cent of the total, and the remaining 142,280 chickens, or 36 per-cent, mainly "spent layers", were produced by the other, much smaller, commercial farms.[6]

The figure for the other commercial farms appears to be too high. This may due to an under-statement of the official import figures and/or an over-estimation of the consumption of chicken. Although shortages of chicken meat, which may serve to limit the level of consumption of chicken meat overall, are known to exist on feast days, the main reason could be due to under-recording/reporting of the import data.

The farmers in the survey reported selling, on average, 30 per-cent of the chicken wholesale (two-thirds to the hotels and restaurants, and one-third to the hotels) and 70 per-cent on retail (30% to households and 40% to middlemen). An unknown proportion of the quantity sold to middlemen is on wholesale basis.

b) Eggs

The local production of eggs is estimated at a minimum of 8,415,000, or 74 per-cent of the total consumed in Greater Banjul in 1993. Total production of salable eggs[7] by the 6 large farms in Greater Banjul is estimated at 7,113,000, or almost 85 per-cent of the total produced on local poultry farms. Only very small quantities of eggs are sold by the "traditional" farms and the remaining 15 per-cent, or 1,302,000 eggs, are produced by the other, much smaller commercial farms. Unlike the production of broilers, a number of farms outside Greater Banjul, including one in Bwiam, supply the area with eggs.

At the time of the survey, some of the farmers indicated that they were unable to sell all of their eggs because of a large influx of imported eggs from Holland. The problem appeared to be temporary, and the farmers reported that they are always able to sell their products. In general, lack of demand does not appear to be a problem for the farmers.[8]

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[6]For the other commercial farms, the figure of 142,280, which is a "residual", has been computed as follows: (total estimated consumption) minus (imports + production of large commercial farms + production of traditional farms).

[7]Assuming a breakage/spoilage rate of 10%

[8]One large commercial which produced white eggs on an experimental basis was finding it difficult to sell the eggs. Some of the reasons for this difficulty include: (i) the fact that white eggs break much more easily than

Table No.1: Large Commercial Poultry Farmers (as of 1993)

Name	Location	Annual Production of Broilers	Eggs
Green Gold	Fajara	1,960	400,000
G.G.P.V.D.	Bijilo	63,700	1,314,000
Kerr Kandeh	Nema Kunku	18,620	2,200,000
Kebba S. Darbo	Wellingara	19,600	1,971,000
Gaira Z. Lamin	Wellingara	8,820	0
C.Y.S.Jow	Abuko	54,880	1,839,600
Fatou Kinneh Jobe	Abuko	38,220	0
Mohammed Haidara	Kololi	51,450	100,000

Note: At the time of the survey, all of the above were in operation and each plans to continue production at least at the current levels. At least one large producer, Dr. Touray, returned to poultry after a break. He has already ordered 3 cycles of broilers (i.e. a total of 3,500 birds) and he plans to do more during the year.

Based on the interviews, the large commercial farmers sell together, on average, 10 per-cent to supermarkets, 30 per-cent to hotels, 35 per-cent to middlemen and 25 per-cent to households.

2) Imports

a) Chicken

Imports constitute just over 45 per-cent, or 331,750 chickens, of the total consumed in the area.[9] Government sources indicate that a total of 16 traders/firms imported chicken during the year 1993. The 5 largest traders/firms, all supermarkets, together imported a total of 245,250 chickens, mainly frozen, into The Gambia.

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brown eggs, and the likelihood of such an occurrence is high given that the eggs have to be washed before they are boiled in order to be served as "table" eggs; (ii) some people who would prefer not to buy imported eggs perceive the origin of all white eggs as imported and would therefore not buy those of the local farmer; and (iii) requests for white eggs in particular come only during Easter and given the small size of the Christian population in the country, the demand is considered small.

[9] See Footnote 6.

b) Eggs

Large quantities of eggs are imported into the country on a regular basis. In 1993, a total of almost 8 million eggs were imported. Some of the eggs (estimated at 30% of the total according to interviews with the importers and wholesalers) are re-exported, mainly to Guinea Bissau, while a substantial proportion (25%) are reported by the retailers in the survey to go bad during storage. Furthermore, only 70 per-cent of the imported eggs are estimated to be consumed in the Greater Banjul Area. Thus, imported eggs are estimated to meet a maximum of just over 26 per-cent of the total, or 2,917,000 eggs, consumed in Greater Banjul.[10]

In 1993, a total of 7 importers including a hotel, a supermarket, a poultry farmer and 4 traders imported a total of almost 8 million eggs. The 4 traders together imported 94 per-cent of the total, with 1 trader contributing 68 per-cent of that figure.

Supply and Demand of Poultry Products, 1988 - 1993

A total of 13 large farms were involved in the supply of poultry products in The Gambia in 1988, as follows (Grobar, 2):

Table No. 2: Large Commercial Poultry Farmers, 1988

Name	Location	Annual Production of Broilers	Eggs
G.G.P.D.V.	Bijilo	60,000	823,500
Kerr Kandeh (Jagne)	Nemakunku	1,500	520,000
C.Y.S. Jow	Fajara	5,000	547,000
Fatou Jobe	Fajara	6,000	98,000
Mohammeh Haidara	Kololi	36,000	0
Imad Kassir	Farato	1,900	547,000
Mrs Fye	Bakau	910	260,000
Edel Milky	Bakoteh	1,000	286,000
George Raid Azzi	Lamin	2,500	0
Baboucarr M. Fye	Kombo North	4,000	292,000
Edrissa Saffriwe	Tabokoto	880	252,000
Sering Jobe	Sinchu Balia	1,150	328,500
N'Jaga N'Jie	Banjuinding	10,000	0

[10] The consumption of imported eggs is not restricted to Greater Banjul as these are to be found in shops as Basse. Locally produced eggs, on the other hand, are not transported as far as the wholesalers (mainly the producers themselves) do not have the distribution network to move the eggs beyond a certain radius of Greater Banjul.

Compared to the results of the current study (Table 1), the figures in Table 2 indicate that:

(i) overall, local poultry production has become much more "concentrated" with fewer large farms in the commercial sector;

(ii) that the smaller number notwithstanding, the production of both broilers and eggs in the large commercial farms increased almost two-fold over the period (broilers from a figure of 130,000 to 257,250, and eggs from 3,945,000 to 7,824,600);

(iii)that the level of production of each of the 5 farms that existed in both 1988 and 1993, grew over the period to the extent that two farmers (C.Y.S. Jow and Fatou Jobe) have had to re-location their farms (because their "backyards" could no longer accommodate the chicken population); and

(iv) one relatively large farmer (Kebba S, Darbo) has replaced several of the relatively smaller ones in the table.

Comparative figures for imports of chicken and eggs are not available.

Total consumption of chickens in Greater Banjul in 1988, using the Grobar base figures, is estimated at 985,000, of which 107,500 was consumed by tourists. It is also estimated that a total number of 5,316,250 eggs were consumed during that year (tourists 1,344,000). These figures have been arrived at by using the same per capita consumption data as in 1993 for tourists (total population of 43,000) and a local population of 250,000 (with a household equivalent of 24,375).

Although the data sets for the two periods, 1988 and 1993, have been arrived at using different base figures, it is nonetheless instructive to compare the two in order to assess the indicative trends of the levels of consumption of the two products. It would appear from the figures that the level of consumption of chicken meat was reduced, by 26 per-cent, while that of eggs increased, by more than two-fold, between 1988 and 1993. On the supply side, the production of the large commercial farms increased by 100 per-cent for chicken, thereby increasing their proportion of the chickens consumed from 13 per-cent in 1988 to 32 per-cent in 1993; and although they increased the production of eggs by 80 per-cent, their proportion of the total consumed was reduced from 74 per-cent in 1988 to almost 63 per-cent in 1993.

Given the growing preference for locally produced eggs by consumers in Greater Banjul, and the likelihood of a continued increase in the demand for eggs, there appears to be a pent up demand for locally produced eggs.

Prices

The figures in Table 3 show that the price of beef compared to that of chicken has risen much more sharply over the period 1988 to 1993, particularly between 1989 and 1993.[11] Over the latter period, the price of beef rose by 38 per-cent, compared to only 10 per-cent for chicken. Although the cross elasticities of demand for the two products are not available, one could speculate that the consumption of chicken (including broilers which would follow a similar pattern) would have increased much more rapidly, compared to beef, during that period (given an increase of 100% in GDP over the same period and 61% rise in the Consumer Price Index).

Table No. 3: Average Retail Prices (in Dalasis) of Selected Commodities in Banjul, 1988 - 1993

Item	Unit	1988	1989	1990	1991	1992	1993
Chicken	1.0 kg	21.11	26.02	26.24	26.62	27.53	28.77
Beef	1.0 kg	20.00	20.00	22.08	21.46	23.40	27.68
Eggs	1 egg	1.50	1.15	1.46	1.50	1.50	1.45

Source: Central Statistics Department, Banjul

The supply of live chicken comes exclusively from local poultry farms. Broilers, dressed and frozen, and eggs are supplied by local farms and through the import channels. The range of wholesale and retail prices for the products vary according to the source of supply and the distribution channel used to sell the products. (See the section on Supply channels below).

1) Local poultry

a) Chicken

Chickens produced by the local farms do not have a standard weight and this is reflected in the wide range of prices

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[11] As the prices under "chicken" are for live "fowl" it is expected that the equivalent prices for chickens would be higher than those indicated in the table.

that are reflected in Table 4. Also reflected in those figures are the differences in the prices between the various points along the supply channel. A third factor affecting prices is the periodic high demand for the product (during feast days), at which time the prices are raised substantially. Conversely, when the market is flooded with imported eggs, the price of those products are reduced. Although this happens only infrequently.

Table No. 4: Average Prices of local poultry chicken, 1993 (equivalent weight of 1.1 kilograms)[a]

Wholesale supplies to:			Retail to:
Supermarkets	Hotels/Restaurants	Middlemen	Households
GMD30	GMD32	GMD32 - GMD35	GMD35 - GMD40

[a] The figures for middlemen include the prices for "spent fowl"

The lower limit of GMD 30 represents the price for broilers weighing 1.0 kilograms equivalent (only one farm reported selling chickens at that weight) and also "spent fowl" which are sold live. The upper limit of GMD 40 per bird represents broilers of weight between 1.8 kilograms and 2.0 kilograms. Prices vary upwards by up to 25 per-cent (over and above those indicated in the table) during periods of high demand/shortages (represented largely by feast days that coincide with the peak tourist period). Imported eggs are sold for prices as low as GMD1.25, when the market is saturated with them.

b) Eggs

According to the figures in Table 5, and on a wholesale basis, the unit price of eggs ranged from GMD1.00 to GMD1.20 for a carton of 360 eggs; while the unit price is GMD1.25 for a crate of 30 eggs. The eggs sold to the hotels and restaurants on a wholesale basis are maintained at the same price year-round.

On a retail basis, supermarkets sell eggs at unit prices ranging between GMD1.17 and GMD1.33 per egg for a crate of 30 eggs, and street shops at GMD1.50 per egg. The range in the prices sold to the different groups reflects the variation in prices due to shortages during the peak demand period (particularly over the Christmas season).

Table No. 5: Average Prices of local chicken eggs, 1993, per carton of 360 eggs

Wholesale prices to:			
Supermarkets	Hotels/Restaurants	Middlemen	Shops/Indiv.
GMD360 - GMD420	GMD360 - GMD400	GMD420 - GMD435	GMD450

2) Imports

The price range of the imported poultry products are given in Table 6. The variations in the import prices reflect differences in the volume of the consignment of imports and also in the changes in the exchange rates at the particular point in time that the import is made (note that The Gambia has a floating exchange regime in place).

Table No. 6: Prices of imports at different levels of the Distribution Channel

Item	Import price plus taxes [a]	Wholesale	Retail
Chicken	GMD14.5 - GMD20.0	GMD25 - GMD34	GMD34 - GMD38
Eggs	GMD230 - GMD250	GMD300 - GMD400	GMD480 - GMD540

[a] i.e. (((c & f) + import duty of 29%) * (sales tax of 10%)) for the equivalent of a 1.1 kilogram chicken. The import duty and sales tax on eggs are the same as those on chicken.

a) Chicken

The wholesale price of the imported chicken meat is dependent on the supply channel of the product. Chickens sold directly to the hotels by importers on a wholesale basis range from GMD25 to GMD27 for the equivalent of a 1.1 kilograms chicken. However, the hotels buy mainly 0.9 kilogram to 1.0 kilogram chickens, so that the price per bird would be lower than those indicated above.

The major supermarkets import their own chickens and sell them at prices ranging between GMD32 and GMD34 on wholesale basis, i.e. per pack of 10 chickens, and GMD36-GMD38 on retail.

b) Eggs

Imported eggs are sold wholesale at prices ranging from GMD250 to GMD450 per carton of 360 eggs, depending on the periods of "over-supply" and shortages, respectively, in the local market. However, a price range of between GMD300 and GMD400 is more common.

All but one of the hotels interviewed choose not to buy imported eggs in the local market. In any case, the hotel concerned reported making the bulk of his purchases from local poultry farmers. Only one hotel reported that it imports eggs for its own use. However, this is limited to its requirements of white eggs for the "table". It purchases brown eggs from the local poultry farmers.

Supply Channels

1) Local poultry

The marketing of poultry products by the local producers is not well organized. The farmers are their own wholesalers and retailers, and large quantities of broilers, live chicken and eggs are sold at farm sites. Where outlets other than the farm sites exist, then they constitute at the most two shops per farmer, with limited refrigeration facility, located mainly in their homes. These shops do not normally carry other food items, so that buyers visit them only to purchase eggs and/or chicken.

a) Chicken

Except for one producer who has a refrigerated container, most of the producers have only large size "deep freezers" for storing the chicken meat. Chickens are slaughtered mainly after arrangements have been made for their sale, although small volumes of frozen chicken meat are held in stock.

Wholesale sales include deliveries of the relatively small quantities sold to the hotels, restaurants and supermarkets. The farmer makes the deliveries in a pick-up vehicle at no additional cost to the buyer. A high proportion of the "spent hens" are sold live, mainly on retail basis, to middlemen who pick them up from the farms.

The end-user of the broiler meat, i.e. the households, buy the chicken meat on retail basis from the supermarkets, the shops owned by the farmers and from the middlemen. A regular clientele is established in the neighborhood of the farmers' residence/shop, which is always located in the urban area.

b) Eggs

The farmers use the same supply channels to market both the chickens and the eggs. The farmers in the survey indicated that the requests for supply of eggs were much more predictable than those for chicken meat. Storage does not appear to be a problem for the farmers and a large proportion of the eggs are delivered to the buyers (at no extra cost).

2) Imports

Most of the chicken meat imported into The Gambia comes from Western Europe, namely Holland, Denmark, Belgium, Spain (primarily from Hungary), Germany and the United Kingdom. All of the eggs are of Dutch origin, although on a few occasions eggs from Senegal have been imported into The Gambia. Large quantities of eggs, estimated at 30 per-cent of the imports, are re-exported to Guinea Bissau. Until recently, Guinea Conakry was also a market for eggs re-exported from The Gambia.

But for a small quantity of chicken meat which enters the country via Yundum airport, the poultry products are brought in by ocean going vessels and landed at the port of Banjul. The products are then transported by road for storage in warehouses, in the case of eggs, and refrigeration facilities, in the case of chicken meat.

a) Chicken

Chickens are imported mainly by hotels, supermarkets and general food wholesalers. These importers have adequate refrigeration facilities for storage of chicken meat, and in the case of the general food wholesalers, there is a regular market for their products in the hotels (and supermarkets).

While the hotels import the chicken meat for their own consumption, the general food wholesalers sell the products mainly to smaller supermarkets, hotels and restaurants. In turn, the supermarkets, large and small, sell the products on retail to their main customers, i.e. households. Because of the need for refrigeration facilities chicken meat is not sold in small street shops and in the local market.

b) Eggs

Except for one hotel and one supermarket, eggs are imported into The Gambia exclusively by traders, on a regular basis. The traders do not operate hotels or supermarkets so that the products are kept in warehouses until they are sold. Consignments are large in order to sustain the viability of each transaction. These traders import the eggs and other commodities, and they use well established local marketing channels to sell all of the commodities that they import.

The eggs are sold in large and small wholesale quantities to "second-tier" wholesalers who are located mainly in Banjul. These wholesalers normally deal in more than one commodity and would normally enjoy credit facilities from the primary wholesalers (i.e. the importers). The fact that the "second-tier" wholesalers are concentrated in a particular section of Banjul makes it easy for them to sell to their major customers, including small wholesalers (who sell the commodities up country), retailers and small scale re-export traders.

Although wholesalers also do some retailing also, the main retailers are the small shops in the streets and local markets. These normally sell to the end-users, comprising mainly households.

Annex 1: List of Establishments/persons included in the survey

1.	Poultry Farms	Kerr Kandeh (M.M.Jagne) Kebba S. Darbo Charles Y. Jow Gambia Gighua Poultry and Veg. Dev. Co. Green Gold (Olu Taylor Thomas) Mohammed Haidara Gaira Z. Lamin (Manager of operations) Fatou Kenneh Jobe Jane Clement Dr. B.N.Touray
2.	Importers	Atson's Supermarket Paul Maroun's Supermarket Kairaba Supermarket C.F.A.O. (Supermarkets) Boule & Co. (St Mary's Supermarket) Sunwing Hotel Senegambia Beach Hotel Atlantic Hotel Ebou Jallow I.T.S. Jaafar Lamarana Jallow
3.	Supermarket	Happiness
4.	Hotels	Kombo Beach Badala Park Bungalow Beach
5.	Restaurants	Scala Baker's Fast Food
6.	Ground Operator	West African Tours
7.	Retailers	One each in the following markets: Banjul Bakau Serrekunda Basse

APPENDIX 1: ESTIMATES OF CONSUMPTION OF CHICKEN MEAT AND EGGS BY HOUSEHOLDS IN THE GAMBIA, 1993

1. The C.S.D. Price Survey

The following table gives estimates of the consumption of chicken meat and eggs in The Gambia in 1993, based on the "Price Survey" which was conducted by the Central Statistics Department, Ministry of Finance and Economic Affairs.

Table No. A1: Annual Consumption of Poultry Products by Households in The Gambia, 1993, by Area

	Greater Banjul	Rest of The Gambia	Total for The Gambia
1. Consumption (Dalasis per capita)			
Chicken	42.86	9.28	19.65
Eggs	37.62	2.79	15.14
2. Price per unit (Dalasis)			
Chicken	28.20	22.09	24.26
Eggs	1.50	1.50	1.50
3. Consumption (Units per capita)			
Chicken	1.52	0.42	0.81
Eggs	25.08	1.86	10.09
4. Population	363,373	662,494	1,025,867
5. Total consumption: (Units)			
Chicken	552,696	281,286	833,982
Eggs	9,114,969	1,232,050	10,347,019

Source: Extracted from "1992/93 Price Survey Report, The Gambia" and "Population and Housing Census 1993, Provisional Report (1)", Central Statistics Department, Ministry of Finance and Economic Affairs, Banjul, 1993.

2. The Grobar Survey

Based on the Grobar Study, the average Gambian family participating in the survey was found to consume 3 chickens and 17 eggs per month. The average family (i.e household) constituted 8.1

adult equivalents (children under 13 were given a weight of 0.5). The survey was limited to the Banjul and Kombo St. Mary Division.

If the results of the Grobar Study are used to estimate the consumption for the entire country in 1993 (population, 1,025,867 with children under 14 constituting 44% of that total[11]), then the following figures are obtained for chickens and eggs, respectively, 3,600,000 and 20,400,000. These figures appear rather high, partly because the consumption of the products in the Banjul/Kombo St. Mary's Division, where incomes are much higher, would be much higher than that in the rural areas.

The figures for Greater Banjul, using the same bases of projections as above, with a population of 363,373 in 1993, would be 1,275,480 chickens and 7,227,720 eggs. These figures would be higher if the weight of 0.5 were given to children below the age of 13 years (as per Grobar) as opposed to those below 14 years.

[11]The population profile of 44 per-cent children under 14 is based on the population census for 1983; the figures for 1993 are not available.

APPENDIX 2: ESTIMATES FOR THE CONSUMPTION OF CHICKEN MEAT AND EGGS BY TOURISTS TO THE GAMBIA

In order to arrive at estimates for the consumption of poultry meat and chicken eggs by tourists visiting The Gambia, data were collected from 6 tourist hotels. Together, these 6 hotels handled almost 60 per-cent of the total number of tourists for the year 1993. The data collected from them included estimates of the annual purchases of the products, the number of visitors (mainly tourists) handled by the hotels and the average length of stay for each tourist. The results of the survey are given in Table.....

The figures in the table reveal that, on average, each tourist consumed 2.5 chickens and 31.25 eggs during the 12.5-day stay in The Gambia. With a total number of tourists of almost 71,000, these figures translate to a total consumption of 177,500 chickens and 2,218,750 eggs by tourists.[13]

Table No. A2: Consumption of Chicken Meat and Eggs by Tourists, 1993

Product	Number of Chicken	Number of Eggs
Total Consumption	93,300[a]	1,274,960
Tourist Nights[b]	445,250[a]	519,250
Average Consumption per Tourist Night	**0.21**	**2.46**

[a] Sufficient information on chicken meat consumption was not available from 1 hotel, therefore the number of tourist nights for that hotel has been excluded from the total.
[b] The number of Tourist Nights is the product of the number of tourists and the average length of stay of 12.5 days per tourist.

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[13]The figures for the average consumption of the products per tourist varied among the different hotels. The large hotels, all of which serve chicken as part of a varying cuisine at every meal throughout the year, consume high quantities of chicken. The estimates for them range from 2.75 to 3.40 chicken per tourist stay of 12.5 days. The small hotels, on the other hand, including one that provides cooking facilities in the guest rooms, consume much smaller quantities of the products.

The pattern for egg consumption was different. The consumption depended largely on the type of guests ("Bed and Breakfast" versus other guests) and the type of breakfast served (ranging from "Full English" to "Continental"). Furthermore, within the "Full English" category, hotels which serve boiled eggs reported consuming larger quantities (as some tourists remove eggs from the dining area) than those that serve only fried/scrambled eggs.

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