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LIVESTOCK AND MEAT MARKETING PATTERNS AND COSTS
IN THE ENTENTE AND ADJOINING COUNTRIES

Final Report of

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Council of the Entente

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BACKGROUND NOTE

The Entente countries consist of Ivory Coast, Togo, Dahomey, Upper Volta and Niger. The Council of the Entente is an international organization of these countries that was formed to promote closer cooperation in regional economic development. The ruling body of this organization consists of the presidents of the five countries.

The Economic Community for Livestock and Meat is a subsidary organization that was formed in 1970 for the purpose of creating a common market for livestock and meat among the Entente states. The ruling body of this organization, known as the Council of Ministers, is composed of the Minister of Agriculture and the Minister of Commerce (or their equivalents under another title) from each of the member states.

The activities of the Secretariat of the Community are directed and controlled by the Council of Ministers which meets periodically to make decisions. The office of the Secretariat is located at Ouagadougou, Upper Volta. The staff of the Secretariat consists of an Executive Secretary and three Americain and two French technicians.

The latter are organized into four divisions, consisting of (1) Livestock and Meat Production and Disease Control, (2) Harmonisation of Customs and Fiscal Legislation, (3) Statistics and Information, and (4) Commerce and Transportation.

The duties of the Commerce and Transportation Division are to analyze livestock and meat marketing and transportation patterns and costs in the Entente and adjoining countries and make recommendations for improvement.

During the two year term of my contract it was possible to travel extensively, observing marketing systems at the principal primary markets in the producing zones, following the main livestock routes to the coastal cities, and visiting the terminal markets and slaughterhouses there.

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INTRODUCTION

Livestock Producing Zones.

In West Central Africa, there is a northern surplus producing zone which sends cattle, sheep and goats to the south. This zone includes Niger, Upper Volta, Mali and northern Nigeria. This is a semi-arid region, with a long dry season and a short wet season, and as a result there is a low density of livestock population. Pastures are abundant during the rainy season which is irregular but generally extends from June through September. After the rains stop, the moisture soon disappears and the movement of livestock to the south begins. With the exception of a few low areas near the major rivers and lakes, there is no green forage available for seven to nine months of the year. During this period, the breeding stock remaining in this region suffer greatly from malnutrition, resulting in high mortality and low calf crop rates. Also, it is estimated that 40 percent of the calves born never reach maturity.

The offtake rate or the proportion of slaughter animals raised annually in relation to the total livestock population is approximately 10 7 percent for cattle, 25 percent for sheep and 25 percent for goats. This is much lower than in most other livestock producing regions of the world.

Under the harsh prevailing weather conditions and low output per animal unit, producers have been unable to adopt to modern methods of livestock husbandry. Practically the entire region is one vast open, public range. Privately owned, fenced, ranch type operations are virtually non-existant. Livestock owners are free to move and graze their animals almost anywhere without interference, or at least within those areas where they have traditional and tribal grazing rights.

This type of land tenure has resulted in overstocking the ranges beyond their carrying capacities. Overgrazing by sheep and goats is becoming increasingly more prevalent throughout the region. When land in the northern, more arid part of this region is sevérly overgrazed, it does not respond to the next wet season and becomes a barren sand dune. This condition is reported to be moving southward at an alarming rate.

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Most of the human population in this region live in rural areas, and the majority of these are engaged in livestock raising. There is about one head of cattle and two head of sheep and goats per inhabitant. This means that there are only a few head of livestock per operator-far too small to be an economic unit. To convert the present system into units large enough to permit the use of modern techniques would leave the majority of the rural population unemployed and displaced from land to which they have traditional tribal rights.

Livestock Deficit Areas.

A southern zone composed of Ivory Coast, Togo, Dahomey, Ghana, and Nigeria is a livestock deficit area. Although the northern part of Nigeria produces a substantial surplus of livestock for shipment to the southern part, the country as a whole is deficit zone.

The southern zone as a whole has abundant forage most of the year and adequate water supplies. The limiting factor in practically all of this region is the prevalence of the Tse-Tse fly which infects livestock with Trypanosomiasis, a generally fatal disease and one for which scientists have yet to develop effective controls. Only livestock that are resistant to this disease can be raised successfully in this region. These breeds are considerably smaller than those raised in the northern, semi-arid region. Livestock number in the southern zone are low, and a large part of the abundant forage produced is unutilized.

The region as a whole produces only two thirds of its cattle requirements but over 90 percent of its sheep and goat requirements.

Breeds of Livestock.

In the northern zone various types of Zebu cattle are raised, some with long horns and some with short ones. There are some improved breeds which attain a carcass weight of over 200 kilos, but the average Zebu of this region seldom exceeds 150 kilos. Only the Taurin breeds of cattle which are resistant to Trypanosomiasis are found in the southern zone. The carcass weight of these averages less than 100 kilos.

Sheep native to the semi-arid region are large types which produce

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meat of good quality. The sheep in the southern region are disease resistant and survive well under adverse conditions but are of small size. The type of goats follow the same trend ; that is, large breeds in the north and small ones in the south.

Livestock Numbers.

The cattle population for the eight countries shown in Table I is approximately 23 million head. There are about 13 million sheep and 35 million goats. Most of the 9.2 million head of cattle in Nigeria are located in the northern part of the country and are of the Zebu breeds. The tse-tse fly zone extends across the southern part of Upper Volta and as a result approximately one third of the cattle in that country are of the Taurin breeds, while the remainder are Zebus. Virtually all of the cattle in Mali and Niger are Zebus, while practically all in the Ivory Coast, Ghana, Togo and Dahomey are Taurins, since the tse-tse fly zone covers all of these countries.

Livestock Production and Trade.

The three exporting countries produce approximately 1.3 million head of slaughter cattle annually and export about one third of the production to the five coastal countries, as shown in Table II. Niger exports the largest proportion of its production or about 40 percent. Upper Volta exports 28 percent and Mali 25 percent.

Nigeria is the largest cattle importer, taking around 330,000 head annually or 60 percent of the total imports into the five countries. The Ivory Coast depends upon imports for 80 percent of its cattle requirements, while Ghana imports 50 percent. The importing countries as a whole import one third of their cattle requirements but only 8 percent of their sheep and goat consumption. However, the Ivory Coast imports 43 percent of its sheep and goat requirements, while Ghana imports 22 percent.

Niger is the largest cattle exporter, with an annual movement of around 190,000 head, of which 85 percent normally goes to Nigeria. The Tchad is an important supplier to the West Central Africa area, shipping approximately 150,000 head annually, practically all to Nigeria. Approximately two thirds of the exports from Mali and Upper Volta go to the Ivory Coast and

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most of the remainder to Ghana, as shown in Table III. About 20,000 head of cattle from Mauritania reach the Ivory Coast via Mali.

Nigeria is the largest sheep and goat importer taking around 400,000 head annually, mostly from Niger. The Ivory Coast imports about 340,000 head, with Mali and Upper Volta the principal suppliers, as shown in Table IV.

Per Capita Meat Consumption.

Meat consumption on a per capita basis is low even in the surplus producing countries, where it averages approximately 15 kilos per year. In the five deficit countries it is less than half of this amount or around 6 kilos. However, the latter consume large quantities of fish and other sea food.

MARKETING PATTERNS

Cattle Routes to the Ivory Coast.

The main route from Upper Volta to the Ivory Coast begins at Markoye, passes through Ouagadougou and Bobodioulasso, crosses into the Ivory Coast near Ouangolodougou, and passes through Bouake to Abidjan, a total distance of 1,600 kilometers. About 20,000 head of cattle come to Ouagadougou from Markoye and surronding markets and another 5,000 head from Ouahigouya. About 5,000 head are collected in the Ouagadougou area. Thus a total of 30,000 head are assembled at Ouagadougou, almost all of which are moved to the Ivory Coast by rail. Approximately 5,000 head are moved from Koudougou, 15,000 head from Bobodioulasso and 5,000 from Banfora, thus making a total of 55,000 head exported annuall y from Upper Volta to the Ivory Coast.

The main route from Mali begins at Mopti, passes through Bobodioulasso and follows the same route as the cattle from Upper Volta to Abidjan, a distance of 1,400 kilometers. Previously, 50,000 head of Malian cattle passed through Upper Volta enroute to the Ivory Coast, but because of a transit tax of 760 francs per head imposed by Voltan authorities, more and more cattle pass to the west of Upper Volta via Sikasso and enter the Ivory Coast directly, and it is probable that this will soon become the main route.

Another route begins at Bamako and enters the Ivory Coast at Odienne.

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Approximately 20,000 head of cattle from Mauritania and 5,000 from the vicinity of Bamako use this route annually. Around 10,000 head from Segou and Koutiala enter the Ivory Coast via Tegrela and Boundiali. The total movement of Malian cattle to the Ivory Coast is around 85,000 head annually.

Cattle Routes to Ghana.

The main route goes from Gao in Mali to Dori and Puytenga in Upper Volta and to Bolgatanga and Kumasi in Ghana, with a branch to the east coming from Ayorou and Gotheye in Niger. The principal markets in Upper Volta at which buyers assemble herds for driving to Ghana are Markoye and Puytenga. The main trail runs through the export control post at Bittou to the quarantine station just inside the Ghana border at Bwaku. About 25.000 head from Mali, 20,000 from Upper Volta and 10,000 head from Niger traverse this route annually. About 5,000 head from Ouagadougou pass through Po and enter Ghana at Paga. All of these 60,000 head are put into quarantine for nine days. According to the law, no livestock are allowed to leave the areas by truck and the majority are transported to the terminal market at Kumasi.

Cattle Routes to Togo.

The principal route from Niger begins at Gotheye on the west bank of the Niger river, passes through Puytenga and Tenkodogo in Upper Volta, enters Togo near Dapango, and passes through Sokode and Atakpame to Lome, a distance of 1,400 kilometers. Most of the cattle from Upper Volta originate at Markoye, proceed to Puytenga and follow the same route as those from Niger. Approximately 7,000 head from Niger and 3,000 head from Upper Volta enter Togo annually.

Cattle routes to Dahomey.

The main route begins at Ayorou in northwestern Niger, passes through Niamey, enters Dahomey at Malanville and passes through Parakou to Cotonou, a distance of 1,400 kilometers. The annual volume along this route is around 8,000 head. Cattle from Upper Volta are generally assembled at

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Diapaga in the southeastern part of the country, enter Dahomey near Banikoara and proceed to Parakou, where they are loaded on the train fo Cotonou. Only about 2,000 head pass along this route per year.

Cattle Routes to Nigeria.

At the Niger-Nigeria frontier, there are 16 important control posts through which pass 165,000 head of cattle of Nigeran origin, plus 90,000 head in transit from Tchad and 15,000 head in transit from Mali. From the western sector of Niger, 55,000 head enter Sokota province. From Maradi and Agades, 30,000 head enter Kano province. From the Diffa zone, 30,000 head of Nigeran cattle and 90,000 head from Tchad enter Bornu province. Approximately 60,000 head of cattle from Tchad pass through the Cameroon enroute to Nigeria.

Within Nigeria there is a large movement of cattle from the north to the urban region along the coast. A total of 410,000 head are moved south annually, of which 280,000 pass through Sebba enroute to the Port Harcourt region.

Sheep and Goat Routes.

There is a western route from Mali and Upper Volta to the Ivory Coast, with a branch extending eastward into Niger and another branch from Mauritania through Mali to the Ivory Coast. An eastern route goes from Niger through northern Nigeria to southern Nigeria. A secondary route goes from Niger to Ghana and Togo via Upper Volta, with another route crossing directly from Niger into Dahomey at Malanville. There is another secondary route from Upper Volta into Ghana, Togo and Dahomey.

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TRANSPORTATION METHODS

Movement of Cattle.

Approximately 600,000 head of cattle are moved annually from the surplus producing countries, Mauritania, Mali, Upper Volta, Niger and Tchad into the deficit countries of Ivory Coast, Togo, Dahomey, Ghana and Nigeria. Except for 5,000 head entering the Ivory Coast from Mali by truck and 40,000 head transported by rail from Upper Volta to the Ivory Coast, pratically all of the remainder cross the international borders on foot.

In Ghana, where the law prohibits the movement of cattle by foot, imports which have entered the quarantine areas near the northern border on foot, leave the areas by truck enroute to the terminal market at Kumasi.

About half of the 330,000 head entering Nigeria by foot annually are transported from Kano or other points in northern Nigeria to the consuming centers in the south by rail. Most of the remainder are moved by foot, only a few thousand head being transported by truck.

In the Ivory Coast, some 20,000 head of cattle which have entered on foot are loaded on rail cars at Ouangolodougou for transport to Abidjan. The remaining 95,000 head continue to the southern part of the country by foot.

In Togo, most of the 10 000 head imported annually on foot continue to walk the entire distance to Lome. Approximately 1,000 head are moved from points in northern Togo to Lome by truck and an equal number by train from Blitta, the rail head, to Lome.

In Dahomey, all of the 10,000 head of cattle imported, except for a thousand or so moved by truck, are taken by foot to Parakou, the rail terminus, and loaded on the train for transport to Cotonou. Regulations prohibit the movement of cattle by foot between these two points.

Cattle exported from Niger are moved an average of 1,400 kilometers to reach the principal markets. Those from Upper Volta and Mali must travel an average of 1,200 kilometers, while those from Tchad and Mauritania average 2,000 kilometers.

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About 60,000 head of cattle are moved by rail to Abidjan and 10,000 by rail to Cotonou. Approximately 200,000 head are shipped by rail from northern Nigeria to the southern part of that country. Except for a few thousand head moved by truck along the various routes, the remainder or almost 300,000 head, which is one half of the total, move the entire distance to market by foot.

Movement of Sheep and Goats.

Approximately 850,000 head of sheep and goats are imported into the five deficit countries annually. However, these countries are also important producers and depend upon imports for only 8 percent of their requirements. The total value of sheep and goat international trade is only one tenth that of the cattle trade.

The Ivory Coast receives 340,000 head of sheep and goats annually, mostly from Mali and Upper Volta. Most of those from Mali are transported by truck and the majority of those from Upper Volta by rail. The number moved by foot for long distances has declined rapidly in recent years. Nigeria receives 400,000 head annually, mostly from Niger. Truck transport has not developped so rapidly in this region and over half of the total crossing the frontier are probably still moved by foot. Ghana imports 70,000 head from Upper Volta and Niger, all of which are moved by foot into quarantine areas in northern Ghana and then by truck to Kumasi.

Efficiency of Rail Transport.

Inefficiency in the operation of the railway between Upper Volta and the Ivory Coast has resulted in a 25 percent decline in the number of head of cattle transported within the past five years. Cattle cars are frequently unavailable for two or three weeks, forcing cattle merchants to either walk their animals to the Ivory Coast or incur additional expenses in maintaining the herd while awaiting cattle cars. After the animals are loaded, the train must usually wait a minimum of eight hours for customs clearance before being able to depart. The cattle cars do not have adequate ventilation so that the animals become overheated while in transit. The couplings of the cars are usually in bad condition forcing delays enroute. At least 10 percent of the cars are out of circulation

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awaiting repairs. There is usually a delay of 10 or more days in returning cars to Upper Volta.

If an animal falls down it is usually unable to get up without assistance from at least two men, but there is usually only one caretaker per car and the animal is left to die.

Five years ago, the trip from Ouagadougou to Abidjan was reported to take two days. According to cattle merchants interviewed, the average is now four days and sometimes as much as seven days. No matter how long the trip, the cattle are not given any forage or water. When the trip required two days, an average of one head per car died during the trip. Since the average capacity of the car is 27 head, this would amount to a percentage loss of almost four percent. Now, the losses run as high as four per car, according to some sources. Thus, when the cattle finally reach the slaughterhouse some two or three months after beginning the journey, they have lost perhaps 25 kilos in weight and are on the point of death from exhaustion and malnutrition.

In Dahomey, on the other hand, the railway appeared to be operated with considerable efficiency. Cattle are moved from Parakou to Cotonou, a distance of 438 kilometers, in an average of 12 hours. Cars have adequate ventilation and death losses in transit are reported to be around one head in 500. This railroad handles about 12,000 head of cattle per year.

In Togo, there is a railroad from Blitta to Lome, a distance of 277 kilometers. This line handles only 1,000 head per year because the cattle merchants prefer to walk the animals to Lome, except during the dry months of January and February, when there is a shortage of forage and water along the livestock trail. This railroad appears to be reasonable efficient and is reported to make the trip in an average of 14 hours.

Efficiency of Truck Transport.

Although most of the roads along the main cattle trails are not all asphalted, they have for the most part been improved to the extent that there is regular truck traffic over them during most of the year. Within the last year or two, it has become customary to transport most of the sheep and goats by truck where rail service is not available

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and there is beginning to be some movement between points where rail service is available.

However, it seems to be an almost unanimous opinion among cattle merchants that it is more economical to transport cattle by foot than by truck. One of the few exceptions is the movement of premium quality steers from Mali to Abidjan and from northern Togo and Dahomey to Lome and Cotonou.

The movement of livestock by truck is a yet unorganized. There is no schedule of rates and charges vary according to supply and demand. The usual vehicle used to haul livestock is a 10 ton truck with a capacity for 10 or 12 head of cattle or about 60 sheep and goats. Although there are fleets of semi-trailer units used by large companies throughout the Entente countries, they are not yet used to any extent for transporting livestock. However, it is apparent that the use of trucks to haul livestock is increasing and that eventually semi-trailer units designed to handle livestock will be used.

One of the main obstacles impeding the efficient use of truck transport are the barricades at the international borders. When leaving one country there are usually two such barricades--one for sanitary inspection and one for paying export duties. When entering the other country, there are two more--one for inspection and one for paying import duties. Truck operators report that they are delayed for hours in passing these barriers. They also report that they are haulted at almost every town along the route and required to pay a tribute of several thousand francs before being allowed to proceed. This results in extremely high truck rates, which are also high because there is usually nothing to haul on the return trip.

In summary, the movement of livestock from production zones to market is a dismal picture of waste and inefficiency. Unnecessary delays occur at every point. Neglect in feeding and watering animals causes a high rate of death losses and shrinkage. Although movement of livestock by foot involves low, out-of-pocket costs, losses and shrinkage ultimately make it a high cost system relative to the price of the product. However, where alternative method of truck or rail transport exist, the inefficient management and unnecessary delays enroute also make these high cost systems.

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Transport of Meat.

Some cattle are slaughtered in the surplus producing countries and the meat shipped to the consuming centers on the coast. Upper Volta normally ships slightly less than 2,000 tons annually to Abidjan. This is equivalent to 13,000 head of cattle or 15 percent of the total cattle exports.

There are five refrigerator railcars of eight tons capacity each which circulate between Ouagadougou and Abidjan and occassionally between Bobodioulasso and Abidjan. Each car requires approximately one week to make a round trip ; thus the quantity of meat that can be shipped in one year is limited to about 2,000 tons. Problems encountered are irregular hours of arrival and departure of trains, with long delays in transit and malfunctioning of refrigerator equipment--factors which create a high cost situation.

The cost of shipping meat by refrigerated railcar from Ouagadougou to Abidjan amounts to 28 francs per kilo including handling and delivery. Taxes collected by authorities in Abidjan amount to an additional 22 francs, making a total cost of around 50 francs per kilo. The cost of transporting live cattle between these two points is calculated at approximately 55 francs per kilo, carcass weight basis, or 10 percent more than the cost of shipping the meat.

Approximately 25 percent of the beef carcasses produced by the abattoir at Niamey or something less than 1,000 tons are shipped by air annually, mostly to Abidjan. Loading operations at Niamey and unloading operations at Abidjan are extremely inefficient. Palattisation and use of fork lifts would greatly speed up operation, while construction of chill rooms at the airport would greatly reduce deterioration of the product. The cost of shipping meat from Niamey to Abidjan amounts to arounds 90 francs per kilo, of which 31 francs consists of taxes collected at Abidjan.

About 1,000 tons of beef carcasses are moved by refrigerated railcars from northern Nigeria to Lagos, and probably an equal quantity by truck.

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LIVESTOCK MARKETS

Markets in the Surplus Producing Zone.

The areas where most of the cattle are purchased for export lie north of a line passing from Bamako in Mali to Bobodioulasso and Ouagadougou in Upper Volta to Niamey in Niger. In Mali, the principal markets are located at Mopti, San, Segou, Bamako, Gao and Ansongo. In Upper Volta, the markets are at Markoye, Puytenga, Dori, Kaya, Bobodioulasso, Ouagadougou, Koudougou, Barani and Ouahigouya. In Niger, they are located at Ayorou, Gotheye, Abella, Niamey, Tahoua, Maradi, Zinder, Diffa and Agades. All of these markets usually handle over 5,000 head of cattle annually and several over 25,000 head. They also handle about an equal number of sheep and goats and a smaller number of camels, donkeys and horses.

Most of the markets consists of an open field near the edge of town. As a rule, there are no fences, corrals or pens to restrain or segregate the animals, making it necessary to have a large number of herdsmen to keep the various lots of livestock offered for sale separated. Some of the markets have a small holding pen with a chute for performing vaccinations on cattle, a requirement for all animals destined for export. Markets for each type of livestock are held in separate locations adjoining the cattle market. Most of the markets operate only one day per week, except at major transfer points and consuming centers such as Ouagadougou, Bobodioulasso and Niamey, where they operate daily.

The markets operate under the jurisdiction of the Livestock Divisions of the Departments of Agriculture of the various countries. Officials of the department reside at all the principal markets, where they have responsibility for making sanitary inspections and vaccinations, compiling statistics on the number, origin, destination and prices of the various types of livestock handled by the market. They also collect fees and taxes.

The sellers at the primary markets are either producers with a few head of livestock or small buyers who have collected a few head

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in the bush. Most of these have less than five head of cattle to market. The buyers at the primary markets purchase the largest and best quality cattle for export to the terminal markets on the coast. Those of lower quality are used for local consumption in the larger cities and towns within the country. Six year old steers are preferred for export because these bring a better price and also because they are stong enough to stand the long journey to market.

Cattle buyers assemble herds varying in size from 40 to 300 head, with the average size around 75 head, for the purpose of moving them to market. The small operator usually buys a few head at a time over a period of a month or longer, until he has assembled a herd of 50 to 100 head. He then takes them to the terminal market and sells them before returning to buy more cattle. Since the trip to market requires two or three months and he must wait two or three months to receive payment for the animals after selling them, he can make only about two trips per year. The large cattle buyer, on the other hand, can finance several herds of 100 to 300 head at the time, and usually has several employees assisting him in purchasing animals and assembling herds.

Since the average cattle producer has only a few head to offer, the buyer must engage in a large number of transactions in order to form a herd. Payment to the producer in cash is the rule, making it necessary for buyers to have large sums of cash on hand in order to acquire a herd. Since the livestock routes are international, buyers must juggle various kinds of currency and run the risk of unannounced devaluations and exchange restrictions.

Most countries require livestock merchants to secure licenses in advance for the number of cattle or other types of livestock they expect to buy.

The livestock buyer usually makes all of his purchases through a livestock broker. At the larger markets custom and tradition prohibit direct deals between seller and buyer. However, at some of the smaller markets, direct negociations are permitted because there are no brokers.

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The livestock broker is a profession recognized by law and custom and usually requires a license in order to operate. In accordance with tradition, a broker is permanently attached to one particular market and does not engage in business at any other market.

There is no official or published information available at the markets as to current livestock prices, so that it is difficult for the producer to determine the actual value of his livestock. Sales are made on a per head basis rather than by weight, adding to the difficulty. As soon as the producer arrives at the market, he is quickly approached by a broker, who persuades him to allow him to find a buyer for his animals. This service does not cost the producer anything, in theory, since it is the buyer who pays the broker's commission. Bargaining between the producer and the broker and between the broker and the buyer is frequently done with enough secrecy that neither the producer nor the buyer knows how much the middleman is getting out of the transaction in addition to his authorized commission. In addition, there are numerous speculators who attempt to interpose themselves somewhere between the seller and the buyer in order to make something out of the transaction.

Terminal Markets in the Deficit Countries.

The principal terminal market in the Ivory Coast is located in Abidjan. There are also important markets at Bouake, Dombokora and Agboville. The two main markets in Ghana are at Accra and Kumasi, the latter being the most important. The principal market in Togo is at Lome, and in Dahomey at Cotonou. In Nigeria, the largest markets are at Lagos and Ibadan in the west and Port Harcourt in the east.

At the market in Abidjan, there are numerous small pens for holding livestock until sold, with a roof over the entire area to protect the animals from the hot sun. None of the other markets have such modern facilities. There are no large meat packing organizations or privately owned slaughterhouses at any of these markets. All of the abattoirs are of the traditional municipal type, where the government owns the facilities and leases space to numerous small butchers who purchase a few head of livestock and do their own slaughtering. Under these conditions, the livestock merchant is unable to sell his

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entire herd to one buyer and instead must engage in a large number of transactions and depend upon commission men and speculators to find buyers. After the merchant has sold his herd, he must wait several months before receiving payment because the small butchers do not have sufficient operating capital.

MARKETING COSTS

Costs at the Primary Markets.

The costs which the cattle buyer incurs prior to the time the animals are moved from the buying point toward market are estimated to approximate 900 francs per head, as shown in Table V. The two main items of expense are the broker's fee and taxes . It usually takes a cattle merchant from one to two months to assemble enough animals to form a herd large enough to take to market. During this period, he must pay someone to care for the animals.

Transport Costs.

Trekking costs consist of a salary and food allowance paid to drovers, plus a small cost for forage and water for the cattle during the drive. These costs amount to approximately 100 francs per head per 100 kilometers of distance covered.

The major part of the cattle leaving Markoye enroute to Abidjan are trekked to Ouagadougou, a distance of 400 kilometers and loaded on the train for the remaining 1,200 kilometers of the journey. Rail transport costs are calculated at 2,650 francs per head. Other costs are for death losses and shrinkage enroute and export taxes. Total transport costs for this route are slightly over 6,000 francs per head.

On the Markoye to Lome route, total transport costs are almost 6,500 francs per head, of which export and import taxes are the main items. Cattle from Ayorou are moved by foot to Parakou and put on the train for the remaining 440 kilometers to Cotonou. Regulations prohibit the movement of livestock by foot between Parakou and Cotonou. Total transport costs are around 4,300 francs per head, the lowest for any of the routes studied. Total transport costs between Tahoua and Lagos and between Gotheye and Lome are around 6,000 francs for each route.

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Costs at Terminal Markets.

Taxes are by far the main expense at the terminal markets, and range from 1,000 francs per head at Lagos to 2,225 francs at Cotonou. Total terminal market costs are around 2,000 francs per head at Abidjan and Lome and 3,000 francs at Cotonou.

Total Marketing Costs.

The highest marketing costs are for the movement from Markoye to Lome, which amounts to around 9,300 francs per head, while the lowest cost is from Ayorou to Cotonou, which amounts to about 8,300 francs. The average total marketing costs for the five routes studied is approximately 8,800 francs per head on cattle.

Taxes Imposed on Cattle.

As shown in Table VI, there are 14 different taxes imposed on cattle moved from primary to terminal markets. On the average, these taxes amount to almost 50 percent of the total marketing costs. They are highest on the Markoye to Lome route, where they amount to 53 percent of the total marketing costs.

There are numerous taxes collected at the primary markets but the total amount is relatively low compared to the taxes collected at the terminal markets. Upper Volta charges a higher export tax on cattle going to Togo than on those going to Abidjan because Togo is not a member of the UDEAO. The import duty in the Ivory Coast has been suspended for several years. According to customs officials, the export duty imposed by Niger on cattle is collected on nearly all of those moving into Dahomey, but only on about one third of those entering Nigeria, because the long frontier with the latter makes evasion easy. Dahomey has suspended import duties on livestock coming from Niger but continues to collect a duty on those coming from Upper Volta.

Costs and Returns from Marketing Cattle.

Research has failed to disclose any reliable published data on cattle prices either at primary or terminal markets. Figures shown in Table VII are rough estimates for better quality cattle based on information obtained from government officials, cattle buyers and brokers at the various markets.

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The cattle buyer has his funds tied up for five or six months in most cases. This cost is calculated at 20 percent per annum, which is the minimum rate usually available in West Central Africa. This is a cost which should be considered in calculating net returns to cattle buyers.

The difference between the selling price and buying price of the animal gives a gross margin which averages around 15,000 francs per head. After deducting marketing costs and interest, a net return of approximately 3,000 francs is left for the cattle buyer as compensation for his management of the operation. However, it has been observed that some merchants are able to pay lower wages to drovers, evade some of the taxes and in other ways lower marketing costs, and thus obtain higher returns. In reality, no two cattle buyers would have the same exact marketing costs and the costs for the same merchant would vary from one trip to the next. When it is considered that the average cattle buyer markets 75 head at a time and can only make two or three trips per year, his annual income is relatively modest--probably less than 500,000 francs per year.

Sheep and Goat Marketing Costs.

Table VIII gives marketing costs for sheep and goats from Markoye to Abidjan and from Ayorou to Cotonou. Upper Volta is the largest supplier of small ruminants to the Ivory Coast, and the main route begins at Markoye. Niger is virtually the only supplier to Dahomey, with the route beginning at Ayorou.

Costs at Markoye are somewhat lower than at Ayorou because of lower broker's fees and taxes. The major part of the sheep and goats going to Abidjan are trucked from Dori, which is near Markoye, to Ouagadougou where they are loaded on the train for shipment to Abidjan. Small ruminants enroute to Cotonou are driven from Ayorou to Niamey on foot and most of them are loaded on trucks at that point for transport to Cotonou.

Transport costs from Markoye to Abidjan are some 500 francs per head lower than from Ayorou to Cotonou. Some of the difference is due to the fact that combination rail and truck transport to Abidjan is cheaper than the foot-truck movement to Cotonou, but most of the difference is

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because the export tax from Upper Volta is 200 francs per head, while from Niger, it is 450 francs.

Costs at the Abidjan and Cotonou markets are roughly the same. The difference in total marketing costs is due largely to the higher transport costs from Ayorou to Cotonou.

SLAUGHTERING AND MEAT PROCESSING FACILITIES

Niamey.

In the surplus producing countries of the Entente, there is only one slaughterhouse that is of modern design and that has up to date equipment. This plant is located at Niamey in Niger. Although publicly owned, it is operated as a private corporation under contract with a French company. The plant employes three French nationals, seven foremen and 70 employees in other capacities.

The plant has a gravity on the rail killing floor system. There is an electric saw for splitting carcasses and a pneumatic hide puller. There is another rail system for handling sheep and goats and a third one for hogs. The hog line is operated only once a week because relatively few hogs are raised in that locality.

The chilling cooler capacity is 100 beef carcasses or 15 tons and the holding cooler capacity is approximately the same. There is a small freezing chamber and an ice manufacturing plant. However, the plant has no facilities for smoking, canning or otherwise processing meat.

Construction of the abattoir was begun in 1957 and it was not completed and put into operation until 1967.

The plant slaughters some 25,000 head of cattle annually, producing 3,000 tons of beef carcasses ; 30,000 head of sheep and goats, producing 450 tons of mutton ; and 1,000 hogs, producing 50 tons of pork.

Approximately 25 percent of the beef and mutton production is exported by air, mostly to Abidjan. The remainder of the plant output is consumed locally.

Ouagadougou.

The abattoir at Ouagadougou is old, unsanitary and ill equipped.

It is of the municipal type ; that is, the Government owns the building and facilities and leases space to individual butchers who do their own slaughtering. Correct slaughtering proceedures are not followed and labor is not efficiently utilized. By products are improperly handled and wasted. The meattrade is highly disorganized, with about 50 small butchers trying to operate out of the overcrowded facilities.

Approximately 25,000 head of cattle and an equal number of sheep and goats are slaughtered annually. About 1,500 tons of carcass meat is exported to Abidjan annually in refrigerated rail cars.

Since 1965, there has been a project to build a modern slaughterhouse at Ouagadougou. Funds for construction in the amount of approximately 500 million francs CFA have been granted by F.E.D. (Fonds European de Development), but actual construction has yet to begin.

As projected, the plant would be able to handle 60,000 head of cattle per year and an equal number of sheep and goats. If the time required to construct other abattoirs in West Africa is used as a guide, it will be between five and ten years before this plant is ready for operation after construction begins.

Bobodioulasso.

The slaughterhouse in this city is of the municipal type. Construction was begun in 1957 and completed in 1962. The plant does not have any modern equipment except a rail system for moving carcasses into the chill room and loading areas. Local butchers rent space on the killing floor. The chill room has a capacity for 50 beef carcasses and the holding cooler is of equal capacity. One butcher has both rooms leased on a permanent basis to store carcasses prior to shipment. This plant handles around 20,000 head of cattle and an equal number of sheep and goats per year. About 300 tons of carcass meat is shipped to Abidjan via refrigerated rail car annually.

Bamako.

The only other modern slaughterhouse in operation in the surplus producing zone is located at Bamako. It was completed in 1965 with 625 million francs CFA provided by F.E.D. The plant is of modern design with up to date equipment. Slaughter capacity is 220 head of cattle, 200 sheep and goats and 50 hogs per day, which would produce 40 tons of carcass meat. There are two chilling coolers with a combined capacity of 48 tons or 320 beef carcasses. The holding coolers have a total capacity of 120 tons or 800 beef carcasses. There are also refrigerated chambers for offal, mutton and pork. There is a special section in the plant for offal recovery.

When operating at full capacity, the plant employes three personnel at management level, 10 foremen and 140 workmen.

The original marketing plan called for shipping about two thirds or about 7,000 tons of the plant's output to the Ivory Coast. This trade has not materialized to any extent because the Government of the Ivory Coast placed heavy taxes and other restrictions against the import of meat from Mali and suspended the import duty of cattle to encourage the importation of live animals.

Gao.

The construction of a modern slaughterhouse designed to handle 40 head of cattle and 120 sheep and goats per day was begun in 1964 with financing and technical assistance provided by Yugoslavia. However, because of serious errors in design and the lack of a suitable market for the meat, this plant has never operated and is not expected to operate in the foreseeable future.

Kano.

This abattoir began operations in 1965. In the cattle slaughter section there is a gravity rail system but no modern equipment. There is another section for sheep and goats which also has a rail system. Although construction on a cold storage building was started, it has never been completed.

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Approximately 1,000 independent butchers slaughter 65,000 head of cattle and an equal number of sheep and goats annually. With such a large number of operators plus several assistants on the killing floor, there is a high level of disorganization and inefficiency. As a result, the equipment is in bad condition and sanitary conditions are extremely bad.

There is also a meat processing plant located at Kano. The only product produced is corned beef. The maximum production capability is 120,000 cases per year. Beef is purchased from local butchers, since the plant has no slaughtering facilities.

Kaduna.

This city of 175,000 population consumes around 25,000 head of cattle, which are slaughtered in an antiquated municipal abattoir. There is also a modern slaughterhouse with up to date equipment. It also has chilling and holding coolers. This plant can handle 12,000 head of cattle per year, but the actual slaughter is around 2,000 head, because the market for refrigerated meat is limited to a few supermarkets patronized mostly by Europeans.

Southern Nigeria.

This entire area, in which over 400,000 head of cattle are slaughtered annually, has no modern slaughterhouses, according to available information. All are old and of the municipal type. Ibadan, a city of 800,000 population has no abattoir, slaughtering being done in open spaces near the various public markets. There are numerous projects to build modern meat packing plants, but as far as is known, none are under construction.

Deficit Countries of the Entente.

In the four cities with more than 100,000 population, Abidjan, Bouake, Lome and Cotonou, there are no modern abattoirs. All are of the municipal type, lacking modern equipment and sanitation. In the smaller towns, the same situation exists. Projects have been drawn to construct modern slaughterhouses at each of these cities. Arrangements for financing are almost complete and construction is expected shortly.

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Ghana.

A modern slaughterhouse is located at Bolgatanga. It also manufactures sausages and corned beef. Built with German technical assistance, the plant began operations in 1966. The killing floor is equipped with electric hoists and saws. The plant can handle 100 head of cattle and an equal number of sheep and goats per day. There is adequate cold storage space, as well as air conditioned rooms for offal recovery and sausage preparation. The organization has refrigerated trucks with sufficient capacity to transport 3,000 tons of carcass meat to Accra annually. In recent years, this plant has operated at only a fraction of capacity and is now reported to have ceased operations entirely because it has been unable to develop a market for its output in Accra and other consuming centers.

At Thelma, a slaughterhouse was constructed with technical assistance from Yugoslavia. The plant has modern equipment and can handle 60 head of cattle, 80 sheep and goats and 50 hogs per day. There is adequate cold storage space, including separate rooms for offal and pork. The organization has ten trucks for hauling live cattle and six refrigerated trucks for transporting meat. This plant is also operating at greatly reduced capacity because of being unable to develop a market for chilled meat.

The ill-equipped municipal slaughterhouse at Accra handles over 100 head of cattle and an equal number of sheep, goats and hogs, while the one at Kumasi, equally antiquated, handles twice that number, per day. The several thousand highly organized local butchers have thus far been able to maintain their market for unrefrigerated meat and prevent the two modern abattoirs from operating successfully.

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FINDINGS AND RECOMMENDATIONS

Livestock Production and Outlook.

Available information indicates that there are no large, privately owned cattle ranches in the surplus producing areas of the Entente, although several organizations have plans to establish some. Under the traditional land tenure system of public range with communal grazing rights, it would be difficult to establish this type of operation. Under existing conditions, producers have far too few head of livestock to enable them to adopt modern methods of animal husbandry. Ranges are overstocked beyond their carrying capacities and overgrazing by sheep and goats must eventually result in a decline in livestock numbers. Malnutrition and disease resulting from this situation causes a low outup per animal unit and in animals of lowest quality being produced. The vast majority of the cattle being produced would grade "Utility" or lower by U. S. grading standards.

To convert the present system into economic units large enough to permit the use of modern techniques would leave three fourths of the rural population unemployed and displaced from tribal lands they have occupied for generations.

RECOMMENDATION : The governments of the countries concerned should be made aware of the fact that livestock production cannot be increased or even maintened at the present level unless they establish an effective range management program.

Livestock Marketing Patterns.

Under the traditional marketing system that appears to be followed at all the primary markets, the livestock producer arrives with a few head of livestock and is quickly approached by a broker who persuades him to allow him to find a buyer for his animals. This service does not apparently cost the producer anything since it is the buyer who pays the broker's commission. Bargaining between the producer and the broker and the broker and the buyer is done in great secrecy so that neither the seller nor the buyer knows how much the middleman is getting out of the transaction in addition to his authorized commission.

In addition, there are numerous speculators who interpose themselves somewhere between the seller and the buyer in order to make something out of the transaction. When the livestock buyer arrives at the terminal market with his herd, he finds himself at the same disadvantage as the producer at the primary market. He must dispose of his animals a few at a time through brokers who have been retained by the numerous small butchers. There are no large operators who have enough capital to purchase an entire herd, and the small operators are now forcing the cattle merchant to wait for several months for payment after the animals are sold and slaughtered.

Under the present system, the producer at the primary market or the livestock merchant at the terminal cannot find out how much others are getting for their animals and cannot compare prices except by getting a bid on his own animals. The present system of buying livestock by the head puts the seller at a further disadvantage. In recognition of this, the five Entente countries agreed at a conference held in July 1971 to install scales at all of the principal markets.

RECOMMENDATION : Auction markets organized to sell livestock on a weight basis together with a market news service providing current livestock prices by grades should be established in order to give producers an incentive and reduce marketing costs by eliminating middlemen.

Efficiency in Transportation of Livestock.

The movement of livestock from production zones to market is a dismal picture of waste and inefficiency. There are long delays at the customs and sanitary inspection control posts located at the frontiers between countries. Further delays are experienced in paying taxes and in obtaining permits to pass through the various towns along the livestock routes.

Inefficiency in the operation of the railway between Ouagadougou and Abidjan has resulted in a 25 percent decline in the number of cattle transported within the last five years. The trip between these two points now requires an average of four days, compared to two days five years ago. During this period when service was declining, the freight rate on cattle cars was raised 15 percent.

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The only possibility for improving efficiency and lowering transport costs lies in the use of truck transport. However, this cannot be accomplished as long as customs officials and village authorities are allowed to delay and interfere with the movement of trucks. Also, it will be necessary to change the present policy of not paving roads where they parallel railroads, if per ton kilometer costs for truck transport are to be lowered.

RECOMMENDATION : Roads constituting the principal livestock routes should be improved to permit the economical movement of livestock by truck to the consuming centers and eventually the movement of meat by refrigerated truck as slaughtering in the producing zones increases. Governmental interference with truck movements must be eliminated if efficient marketing is to be achieved. This could possibly be accomplished through stricter supervision of the employees involved.

The Multiple Tax Situation.

Taxes have been added a few at a time over the years until there are now 14 kinds of taxes imposed on cattle as they are moved to market. Livestock merchants loose many hours in paying these taxes because they must visit many different bureaus and offices in order to pay them. These taxes now amount to almost 50 percent of the total marketing costs. They have increased by 10 percent in the last five years.

The Economic Community for Livestock and Meat presented a proposal to the Council of Ministers in July 1972 to change the multiple tax structure into a more equitable and simplified form with a reduction in the total levy. This proposal was rejected by the Council.

RECOMMENDATION : The Governments of the Entente countries should be made aware of the fact that their present tax policies are destroying the incentive of producers to increase production and will eventually result in a decline in livestock population.

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Deficiencies in Slaughtering and Meat Processing.

In the five livestock deficit countries, practically all of the 1.7 million head of cattle and 11.3 million sheep and goats slaughtered annually are handled by antiquated, unsanitary municipal slaughterhouses, where independent butchers rent space and do their own slaughtering. In the larger cities, there are as many as 1,000 butchers plus several assistants trying to operate on one killing floor. This kind of operation is inefficient in the extreme. Carcass yields are lowered by incorrect slaughtering and dressing procedures and many by products are wasted.

Where modern slaughterhouses have been constructed in the deficit areas they have been unable to operate efficiently because they have been unable to develop a market for chilled meat and overcome consumer preference for fresh killed, unrefrigerated meat.

In the surplus producing zone, there are two modern abattoirs. The one at Niamey is able to operate somewhere near capacity and export about one fourth of its production. The other one at Bamako was designed to produce 10,000 tons of carcass meat per year, of which the local market could absorb a maximum of 3,000 tons, leaving a balance of 7,000 tons for export. However, they have been unable to market the meat in the Ivory Coast because of trade restrictions and are forced to operate at only a fraction of capacity.

In summary, of the six modern slaughterhouses which have been constructed in the eight countries making up West Central Africa, only one has been able to operate successfully. The others have been unable to overcome the traditional distribution system and establish a market for their output.

RECOMMENDATION : Governments should be made to realize that laws and regulations should be changed and financial incentives provided to permit the establishment of privately owned meat packing plants, located near the source of livestock, and integrated with an efficient, low cost distribution system. This would enable full utilization of byproducts and mean transportation of meat instead of live animals to the principal consuming centers. The private companies engaged in this trade can conduct a market promotion and consumer education program to create a market for their products.

Retail Ceiling Prices on Meat.

Retail ceiling prices on meat in the Ivory Coast, Togo and Dahomey have been frozen at the same level since 1964. Marketing costs heve increased by at least 20 percent since that date, forcing a corresponding increase in the price of livestock. Butchers in these countries are forced to pay more for cattle while being unable to raise the retail price on meat. They can no longer pay cach for their purchases and are forcing livestock merchants to wait for increasingly longer periods for their money. The latter are gradually diverting the supply of cattle to Nigeria which has no ceiling price controls and where butchers can pay cash for their purchases. Government price policies have been more concerned with assuring low meat prices for urban consumers than with providing an incentive for producers to increase production. It is probable that ceiling price controls will continue unchanged until a shortage of livestock forces some action.

RECOMMENDATION : Ceiling prices in the Entente countries should be abolished ; otherwise, these countries will soon find themselves without an adequate supply of meat.

TABLE I. ESTIMATED LIVESTOCK NUMBERS - 1971

	Cattle	Sheep	Goats
		1,000 head	
Exporting Countries			
Niger	4,400	2,500	6,000
Upper Volta	2,600	1,500	2,500
Mali	5,000	1,000	6,000
TOTAL	12,000	5,000	14,500
Importing Countries			
Ivory Coast	400	700	800
Togo	200	600	600
Dahomey	600	500	600
Ghana	600	500	500
Nigeria	9,200	5,700	22,000
TOTAL	11,000	8,000	24,500
TOTAL ALL COUNTRIES	23,000	13,000	39,000

TABLE II. PRODUCTION AND TRADE IN LIVESTOCK FOR SLAUGHTER - 1971

	CATTLE			SHEEP AND GOATS		
	Production	Exports	Percent Exported	Production	Exports	Percent Exported
Exporting Countries	1,000 head		%	1,000 head		%
Niger	480	190	40	2,550	400	15
Upper Volta	300	85	28	1,250	235	18
Mali	500	125	25	3,350	125	4
TOTAL	1,280	400	32	7,150	760	10

	CATTLE			SHEEP AND GOATS		
	Production	Imports	Percent Imported	Production	Imports	Percent Imported
Importing Countries	1,000 head		%	1,000 head		%
Ivory Coast	40	160	80	455	340	43
Togo	20	10	33	360	15	4
Dahomey	60	10	14	335	15	4
Ghana	60	60	50	285	70	22
Nigeria	950	330	24	9,000	400	4
TOTAL	1,130	570	33	10,435	840	8

TABLE III. CATTLE TRADE BY COUNTRIES - 1971

	EXPORTING COUNTRIES					
	Niger	Upper Volta	Mali	Tchad	Mauri-Tania	Total
IMPORTING COUNTRIES			1.000 head			
Ivory Coast	-	55	85	-	20	160
Togo	7	3	-	-	-	10
Dahomey	8	2	-	-	-	10
Ghana	10	25	25	-	-	60
Nigeria	165	-	15	150	-	330
TOTAL	190	85	125	150	20	570

TABLE IV. SHEEP AND GOAT TRADE BY COUNTRIES - 1971

	EXPORTING COUNTRIES					
	Niger	Upper Volta	Mali	Tchad	Mauritania	Total
IMPORTING COUNTRIES			1,000 head			
Ivory Coast	20	175	125	-	20	340
Togo	10	5	-	-	-	15
Dahomey	15	-	-	-	-	15
Ghana	15	55	-	-	-	70
Nigeria	340	-	-	60	-	400
TOTAL	400	235	125	60	20	840

TABLE V. MARKETING COSTS FOR CATTLE MOVED FROM PRIMARY TO TERMINAL MARKETS 1972

	(1) Markoye to Abidjan	(2) Markoye to Lome	(3) Ayorou to Cotonou	(4) Tahoua to Lagos	(5) Gotheye to Lome
COSTS AT PRIMARY MARKETS		CFA Francs per head			
Broker's fee	250	250	500	500	500
Caretaking of herd	50	50	50	50	50
Taxes	570	570	370	370	295
TOTAL	870	870	920	920	845
TRANSPORT COSTS					
Trekking costs	350	1,300	700	600	1,300
Rail transport	2,650	—	1,400	2,850	—
Losses and shrinkage	1,500	1,900	1,200	1,500	1,900
Taxes enroute	1,620	3,240	1,000	1,000	2,800
TOTAL	6,120	6,440	4,300	5,950	6,000
COSTS AT TERMINAL MARKETS					
Broker's fee	100	500	500	500	500
Caretaking of herd	50	200	175	100	200
Truck transport	—	200	200	—	200
Taxes	1,800	1,100	2,225	1,000	1,100
TOTAL	1,950	2,000	3,100	1,600	2,000
TOTAL MARKETING COSTS	8,940	9,310	8,320	8,470	8,845

(1) Markoye to Ouagadougou by foot; Ouagadougou to Abidjan by rail, 1,600 Km.
(2) Markoye to Lome, entire distance by foot, 1,250 Km.
(3) Ayorou to Parakou by foot; Parakou to Cotonou by rail, 1,400 Km.
(4) Tahoua to Kano by foot; Kano to Lagos by rail, 1,500 Km.
(5) Gotheye to Lome, entire distance by foot, 1,400 Km.

TABLE VI. TAXES IMPOSED ON CATTLE MOVED FROM PRIMARY TO TERMINAL MARKETS
1972

	Markoye to Abidjan	Markoye to Lome	Aycrou to Cotonou	Tahoua to Lagos	Gotheye to Lome
TAXES AT PRIMARY MARKETS			CFA francs per head		
Buyer's license	70	70	50	50	50
Market tax	100	100	50	50	25
Municipal tax	75	75	195	195	195
Sanitary inspection	225	225	25	25	25
Certificate of origin	50	50	--	--	--
Export permit	50	50	50	50	--
TOTAL	570	570	370	370	295
TAXES ENROUTE					
Export tax	1,620	2,200	1,000	1,000	1,000
Import tax	--	1,040	--	--	1,040
Transit tax	--	--	--	--	760
TOTAL	1,620	3,240	1,000	1,000	2,800
TAXES AT TERMINAL MARKETS					
Market tax	500	100	125		100
Abattoir tax	1,000	750	1,500		750
Transport tax	300	100	150	(1)	100
Sanitary inspection	--	50	200		50
Departmental tax	--	100	250		100
TOTAL	1,800	1,100	2,225	1,000	1,100
TOTAL ALL TAXES	3,990	4,910	3,595	2,370	4,195

(1) Exact data on taxes at Lagos are not available, but are estimated as above.

TABLE VII. AVERAGE COSTS AND RETURNS FROM MARKETING CATTLE - 1972

	Markoye to Abidjan	Markoye to Lome	Ayorou to Cotonou	Gotheye to Lome
	CFA francs per head			
Selling price per head	40,000	35,000	40,000	35,000
Cost price per head	25,000	20,000	25,000	20,000
Gross margin	15,000	15,000	15,000	15,000
Direct marketing	9,000	9,500	8,500	9,000
Interest on capital	3,000	3,000	3,000	3,000
Total costs	12,000	12,500	11,500	12,000
NET RETURNS PER HEAD	3,000	2,500	3,500	3,000

Note : The average price for cattle at Lome is less than at the other two markets because the quality of the animals marketed there is somewhat lower.

Marketing costs shown in Table V have been rounded to the nearest even figure.

TABLE VIII. SHEEP AND GOAT MARKETING COSTS - 1972

	Markoye to Abidjan	Ayorou to Cotonou
	CFA francs per head	
COSTS AT PRIMARY MARKETS		
Broker's fee	50	100
Caretaking of herd	10	10
Buyer's license	10	10
Market tax	30	10
Municipal tax	10	50
Sanitary inspection	30	50
TOTAL	140	230
TRANSPORT COSTS		
Trekking costs	—	50
Truck transport	200	855
Rail transport	415	—
Losses and shrinkage	90	60
Export tax	200	450
TOTAL	905	1,415
COSTS AT TERMINAL MARKETS		
Caretaking at market	10	20
Broker's fee	50	100
Truck transport	—	50
Market tax	75	25
Abattoir tax	200	120
Sanitary inspection	—	50
Transport tax	150	50
Departmental tax	—	35
TOTAL	485	450
TOTAL MARKETING COSTS	1,530	2,095

Note. Markoye to Ouagadougou by truck; Ouagadougou to Abidjan by rail.

Ayorou to Niamey by foot; Niamey to Cotonou by truck.