

U.S. to Nigeria Agricultural Ocean Transportation Overview

An Overview of U.S. Agricultural Shipment to Nigeria:
[Agricultural Ocean Transportation Data](#)

Introduction

"Nigeria is America's largest trading partner in Sub-Saharan Africa and its fifth largest supplier of oil in the world" according to an article in the *Nigerian Guardian News*. (*Nigerian Guardian online*, June 23, 2000). According to the *Guardian* report, the two-way trade was just under \$5 billion in 1999, with United States exports to Nigeria totaling more than \$628 million. A U.S. Department of Agriculture, Foreign Agricultural Service (FAS), Global Agriculture Information Network (GAIN) Report released in April 2000 forecast an increase in U.S. share of Nigeria's wheat import market from 80 percent in 1998/1999 to 90 percent in marketing year 2000/01. This rise in U.S. share is attributed to ongoing expansion in Nigeria's wheat milling industry and the exclusive reliance of the new entrants on U.S. wheat. According to the forecast, Nigeria is expected to import 1.8 million tons of wheat in 2000/01, and that amount is expected to double over the next 5 to 10 years. Nigeria ranks as the top market for U.S. wheat in Sub-Saharan Africa and the sixth largest overseas buyer of the U.S. wheat during 1998/1999 (FAS, GAIN Report, April 10, 2000). The forecast also predicts a moderate increase in Nigeria's rice imports from 950,000 tons in 1999 to 1 million tons in 2000. The relatively high quality image enjoyed by U.S. rice in Nigeria may boost the market potential for U.S. rice exporters. Though import demand exists for U.S. soybeans, a recent lift of the ban on vegetable oils by the Government of Nigeria created better sales opportunities for U.S. exporters of soybean meal and oil. In fact, imports of U.S. soybean meal were recently recorded for the first time in a decade (FAS, GAIN Report, November 3, 1999). Reform measures introduced in 1999 by the Government of Nigeria may have the potential to reduce the port clearance time and cost of U.S. food and agriculture exports to Nigeria. One of the measures was replacement of preshipment inspection for imports with destination inspection (FAS, GAIN Report, April 29, 1999). More detailed descriptions of U.S. agricultural shipments to Nigeria follow.

U.S. Agricultural Shipments to Nigeria

Agricultural products are shipped in two different ways: in bulk, usually grains, and by container, usually tobacco and other products.

Bulk Grain Shipments: In 1999, grain shipments represented 97.8 percent of total tons of agricultural products shipped to Nigeria. The market for bulk shipment is characterized by competition, absence of government regulation, and individual contract for each shipment. The rates were quoted in dollars per ton, and there was usually one carrier per trip. U.S. gulf ports served as the point of origin for 97.8 percent of grain (bulk) traffic to Nigeria, with Corpus Christi representing 37 percent of the traffic. Eighty-six percent of the grain exported from the U.S. was destined for Lagos/Apapa and Tin Can Island ports. An increase in fuel prices, coupled with the tightening of the market, has led to a 50-percent increase in the landed price since 1998. With the distance between the United States and West Africa comparable to the distance between the United States and Europe, it costs about \$4 per ton more to ship from the U.S. to West Africa than from the U.S. to Europe. This translates into an additional \$100,000 per 25,000-ton shipment, the majority of the cost of which is driven by the ship sizes.

Containerized Shipments: The largest U.S. containerized product exported to Nigeria was tobacco, representing 26 percent of the total TEU's¹ exported in 1999 (78 out of 299 TEU's). Other significant products exported included food stuffs (mixed groceries), dairy products, fish meal, bread, cereal, grain, animal food, herbs and spices, and poultry. Maersk/Sea Land and Torm West Africa (TORM) shipping lines were the largest carriers, representing 35 percent (103 TEU's) and 25 percent (74 TEU's) of total shipment, respectively. The majority of the shipments originated from New York and Savannah ports, each representing about 23 percent of total shipment. Most of the shipments (70 percent, 210 TEU's) pass through intermediate ports before reaching the final destination in Nigeria. Algeciras, Spain, is the largest transshipment point, accounting for 35 percent (73 TEU's), while Antwerp, Belgium is the second largest, with 14 percent (29 TEU's) of the total transshipped products. Lagos/Apapa and Tin Can Island ports represent the final destination for a larger share of the shipped products, accounting for a combined 76 percent (228 TEU's) of the total shipment.

Cost Analysis: It costs relatively more to ship either bulk or container to Nigeria than to Europe. This is partly due to ship sizes, lack of competition, and low volume of trade between the U.S. and Nigeria. As mentioned earlier, it costs approximately \$4 per ton more to ship from the U.S. to Nigeria than from the U.S. to Europe when covering a comparable distance. The freight cost for bulk shipment can be lowered if the ship size is increased to Panamax². As much as \$5.00-\$10.00 per ton savings may be realized if this is done. Other ways in which cost may be reduced include better unload service, improved storage facilities, and take-away at the receiving ports.

It costs about twice as much to ship either a dry container or a refrigerated container to Nigeria as to Europe. It costs about \$1,431 per TEU to ship grains/beans to Europe, while it costs about \$3,135 per TEU to ship the same items to Nigeria. While it costs about \$3,942 per FEU³ to ship poultry to Europe, it costs about \$8,800 to ship the same item to Nigeria. There are several ways in which exporters can manage container services and costs, including improving service contracts, taking advantage of shippers' associations networks, and obtaining market information through USDA's [*Grain*](#)

Transportation Report, Ocean Freight Rate Bulletin, Directory of Freight Forwarders,
and technical publications.

Future Market Prospects: Bulk shipping appears to be responsive to changes in certain economic conditions such as increases in fuel prices. An increase in the price of oil may significantly increase the cost of bulk shipments and, hence, have a negative impact on the volume of trade. On the other hand, establishment of regional handling facilities may reduce the cost of bulk shipments to some parts of Africa. For instance, a regional handling facility located in Ghana may reduce the cost of bulk shipments to Nigeria and other neighboring West African countries.

Despite the relatively high cost of containerized shipping, the trend appears to be promising. The movement toward the building of larger ships (6,000 TEU's), more efficient hub centers, and more efficient home port terminals will eventually reduce the cost of containerized shipment to Nigeria and other African countries. In addition, regulatory changes in the U.S., such as confidential service contracts instituted May 1, 1999, will facilitate negotiation of service contracts and, hence, reduce the long-run cost of containerized shipment. Other factors that may reduce the cost of containerized shipment include improvement in delivery service, such as just-in-time delivery; improved product safety and security; refrigerated product; and identity-preserved grain. These services are not only improving product delivery but quality as well. Hence, these services can be deemed as part of total quality management. It may cost more to offer these services in the short run; however, in the long run, the overall cost will go down.

¹TEU is a "20-foot equivalent unit."

²Panamax is the largest ship that can pass through the Panama Canal (about 55,000 dead weight tons).

³FEU equals two TEU's (one 40-foot container).

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U.S. to Nigeria Agricultural Ocean Transportation Data

Based on 1999 PIERS Data
(Port Import Export Reporting Service)
The Journal of Commerce, New York

Historical Data Analysis (1997-1999)

[Commodity](#) | [Shipping Line](#) | [U.S. Ports](#)
[Transshipment Ports](#) | [Ultimate Ports](#)

Total TEU* for 1999: 299		
Commodity	TEU's	%
Tobacco	78	26%
Foodstuffs (mixed groceries)	43	14%
Dairy products, eggs (milk powder, ice cream)	33	11%
Fish meal	23	8%
Bread, cereal, grain (hops, flour, noodles)	20	7%
Poultry	18	6%
Pet, animal feed	13	4%
Herbs & spices	12	4%
Nonalcoholic beverage (fruit juice, water)	11	4%
Wine	9	3%
Other	39	13%
Total	299	100%
Shipping Line	TEU's	%
Maersk/SeaLand	103	35%
Torm West Africa Lines	74	25%
P&O Nedlloyd	33	11%
Wilhelmsen Lines	26	9%

Mediterranean Shipping	19	6%
Zim Line	13	4%
ACLO	12	4%
America Africa Line	10	3%
Senator Line	6	2%
Compagnie Maritime D Affreterment	2	1%
Total	299	100%
U.S. Port	TEU's	%
New York	49	23%
Savannah	49	23%
Charleston	33	15%
Norfolk	30	14%
Houston	26	12%
Oakland	8	4%
Miami	7	3%
Long Beach	5	2%
New Orleans	3	1%
Newport News	2	1%
Boston	2	1%
Jacksonville	0	0%
Total	299	100%
Transshipment Point	TEU's	%
Algeciras, Spain	73	35%
Antwerp, Belgium	29	14%
Tema, Ghana	26	12%
Rotterdam, Netherlands	22	10%
Gioia Tauro, Italy	16	8%
Felixstowe, UK	15	7%
Barcelona, Spain	10	5%
Other	19	9%
Total	210	100%

Ultimate Port in Nigeria	TEU's	%
Lagos (Apapa & Tin Can Island)	229	78%
Pt. Harcourt	39	13%
Other	31	10%
Total	299	100%
<i>Total transhipped</i>	210	
<i>Direct</i>	89	
<i>% Transshipped</i>	70%	

**TEU: 20-foot equivalent units*

Last Updated on 11/7/00

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Nigeria Historical Data Analysis (1997-1999)

Major Agricultural Commodities in U.S. to Nigeria Container Trade: Table 1 lists the top 10 agricultural commodities shipped in containers from the United States to Nigeria for calendar year 1997-1999.

Table 1. Top 10 agricultural commodities, 1997-1999

Rank	Commodity (1997)	TEU	% of total	Commodity (1998)	TEU	% of total	Commodity (1999)	TEU	% of total
1	Tobacco	135	56	Tobacco	135	52	Tobacco	78	26
2	Grocery products	43	18	Grains, flour products	40	16	Grocery products	43	14
3	Rice	18	8	Grocery products	29	11	Milk, eggs	33	11
4	Hides, skins, furs	9	4	Nonalcoholic beverages	12	5	Fish meal	23	8
5	Wine	8	3	Milk, eggs	9	4	Grain, flour products	20	7
6	Grains, flour products	7	3	Poultry	8	3	Poultry	18	6
7	Milk, eggs	6	2	Wine	6	2	Pet, animal feed	13	4
8	Fabrics	4	2	Spices	5	2	Spices	12	4
9	Spices	4	2	Vegetables	3	1	Nonalcoholic beverage	11	4
10	Canned foodstuffs	2	1	Rice	3	1	Wine	9	3
	Other ag. products	3	1	Other ag. commodities	8	3	Other ag. products	39	13
	Total	239	100	Total	258	100	Total	299	100

(Source: PIERS, Journal of Commerce, NY)

Total shipments of containerized agricultural commodities for 1997 and 1998 were 239 TEU's and 258 TEU's, respectively. Tobacco was the largest product shipped to Nigeria,

accounting for 56 percent (135 TEU's out of 239 TEU's) and 52 percent (135 TEU's out of 258 TEU's) in 1997 and 1998, respectively. In 1997, tobacco was followed by grocery products and rice, accounting for 18 percent and 8 percent of total shipment, respectively.

However, in 1998, grain and flour products became the second largest products (16 percent of total shipment), while grocery product fell to the third position (11 percent of the total shipment). Other top 10 products shipped in 1997 included hides and skins, wine, grains and flour, milk and eggs, fabrics, spices, and canned foodstuffs. In 1998, the list included nonalcoholic beverages, milk and eggs, poultry, wine, spices, vegetables, and rice.

Major shipping lines in the U.S.-Nigeria Trades: Table 2 contains the top shipping lines for agricultural commodities serving the U.S.-Nigeria trades in 1997-1999.

Table 2. Top shipping lines for agricultural commodities, 1997-1999

Rank	Shipping line (1997)	TEU	% mkt. share	Shipping line (1998)	TEU	% mkt. share	Shipping line (1999)	TEU	% mkt share
1	Willhelmsen**	86	36	TORM	129	50	Maersk/Sea Land	103	35
2	TORM	74	31	Willhelmsen	59	23	TORM	74	25
3	AMAF	24	10	Maersk	24	9	PONL	33	11
4	Mediterranean	22	9	PONL	16	6	Willhelmsen	26	9
5	Maersk	15	6	ZIML	9	4	Mediterranean	19	6
6	Senator	8	3	Mediterranean	8	3	ZIML	13	4
7	Italian	8	3	Senator	6	2	ACLO	12	4
8	Hanjin	2	1	AMAF	5	2	AMAF	10	3
9	UUAL	0	0	OOCL	2	1	Senator	6	2
10	-	-	-	-	-	-	CMDA	2	1
	Total	239	100	Total	258	100	Total	299	100

(Source: PIERS, Journal of Commerce, New York).

** Full names of the shipping lines are provided in the [appendix](#).

In 1997, the top shipping line to Nigeria was Willhelmsen, accounting for 36 percent (86 TEU's out of 239 TEU's) of the total shipment. Willhelmsen was followed by TORM, accounting for 31 percent (74 TEU's out of 239 TEU's) of the total shipment. However, the trend was reversed in 1998 with TORM accounting for 50 percent (129 TEU's out of 258 TEU's) of total shipment to Nigeria. Willhelmsen was the second largest carrier in 1998, representing 23 percent (59 TEU's) of total shipment to Nigeria. In 1999, the top shipping line was Maersk/Sea Land, accounting for 35 percent (103 TEU's out of 299 TEU's) of the total shipment. The second largest shipping line in 1999 was TORM, accounting for 25 percent (74 TEU's out of 299 TEU's) of the total shipment. AMAF was the third largest shipper in 1997 but fell to the eight largest shipper in 1998 and 1999, respectively. However, Maersk moved from the fifth in 1997 to the third largest shipper in 1998 and became the largest shipper in 1999 (after merging with Sea Land).

Transshipment Ports: Table 3 contains the list of major transshipment ports to Nigeria. Tema, Ghana, was the largest transshipment port in 1997 and 1998, accounting for 53 percent and 47 percent of total commodity transshipped to Nigeria in both years, respectively. In 1999, Algeciras, Spain, was the largest transshipment port, accounting for 35 percent of total commodity transshipped to Nigeria.

Table 3: Major transshipment ports: U.S.–Nigeria agricultural trade, 1997-1998

Rank	1997	Share	1998	Share	1999	Share
1	Tema	53%	Tema	47%	Algeciras	35%
2	Abidjan	12%	Algeciras	10%	Antwerp	14%
3	Felixstowe	11%	Felixstowe	10%	Tema	12%
4	Antwerp	9%	Antwerp	6%	Rotterdam	10%
5	Algeciras	8%	Abidjan	5%	Gioia Tauro	8%
6	La Spezia	4%	Singapore	5%	Felixstowe	7%
7	-	-	Bremerhaven	4%	Barcelona	5%
	Other	3%	Other	13%	Other	9%

(Source: PIERS, *Journal of Commerce*, New York)

Abidjan, Cote d'Ivoire, was the second largest (12 percent), while Felixstowe, United Kingdom was the third largest port of transshipment, accounting for 11 percent of total shipment in 1997. However, in 1998, Algeciras, Spain, and Felixstowe tied for the second place, with each accounting for 10 percent of total shipment to Nigeria. Other major transshipment ports to Nigeria in 1977 included Antwerp, Algeciras, and La

Spezia, Italy, while in 1998, the list included Antwerp, Abidjan, Singapore, and Bremerhaven, Germany. In 1999, Antwerp, Belgium, and Tema, Ghana, were the second and third largest transshipment points, accounting for 14 and 12 percent, respectively, of total transshipment to Nigeria. Other major transshipment ports to Nigeria in 1999 included Rotterdam, Netherlands, Gioia Tauro, Italy, Felixstowe, United Kingdom, and Barcelona, Spain.

Receiving Ports: In both 1997 and 1998, Lagos/Apapa ports received the largest shipment, accounting for combined 60 percent and 74 percent of the total shipment in both years, respectively (table 4). Port Harcourt received 39 percent and 24 percent in 1997 and 1998, respectively. In 1999, Lagos/Apapa ports received 76 percent of the total shipment, while Port Harcourt received 13 percent of the total shipment.

Table 4: Major Nigerian receiving ports: U.S.–Nigeria agricultural trade, 1997-1998

Rank	1997	Share	1998	Share	1999	Share
1	Lagos/Apapa	60%	Lagos/Apapa	74%	Lagos/Apapa	76%
2	Port Harcourt	39%	Port Harcourt	24%	Port Harcourt	13%
3	Other	1%	Other	2%	Other	11%

(Source: PIERS, *Journal of Commerce*, New York)

****Appendix: Shipping Lines Names**

ACLO	Atlantic Container Line
CMDA	Compagnie Maritime D'affretement
HJSC	Hanjin Shipping Co., Ltd
ITAL	Italian Line
MAER	Maersk Shipping Line
MDSC	Mediterranean Shipping Line
OOCL	Orient Overseas Container Line
MLSL	Maersk and Sea Land

	Shipping Line
PONL	P&O Containers/Nedlloyd
SLNG	Senator Line
TORM	Torm West Africa Line
UUAL	Universal Africa Lines Service
WILL	Wilhelmsen Lines AS
ZIML	Zim Container Line

(Source: Pacific Shipper, The Newsweekly for all Coasts and Models, Sept. 18, 2000)

U.S. Atlantic/Gulf Ports to Lagos, Nigeria

Shipping Line Market Share for January-April 2000*
(PIERS Data, Journal of Commerce, New York, NY)

*Rates are based on filed tariffs as of June 14, 2000

Rates for a 40-foot container of foodstuff/grocery items
Rates for a 20-foot container of foodstuff/grocery items

Information gathered by AMS' Ocean Freight Rate Bulletin team

Compare to U.S.-Europe Ocean Freight Rates

40-foot container of foodstuff
U.S. Atlantic/Gulf Ports to Lagos, Nigeria

<i>Total TEU's: 8</i>	Maersk/ SeaLand	Torm Lines	P&O Nedlloyd
First 4 months of 2000	39%	38%	25%
Calendar Year 2000	39%	38%	25%
Transit time	21 days	17 days	25 days
Rate	\$ 6,450	\$ 5,450	\$ 3,450
Surcharges			
<u>BAF</u>	\$ 150	\$ 150	\$ 150
<u>ARB</u>			\$ 350
Harbor dues	\$ 800	\$ 800	
<u>THC</u>	\$ 500	\$ 500	\$ 500
Rate	\$ 7,900	\$ 6,900	\$ 4,450

Total weighted average: \$6,816
(Based on market share)

20-foot container of foodstuff
U.S. Atlantic/Gulf Ports to Lagos, Nigeria

<i>Total TEU's: 8</i>	Maersk/ SeaLand	Torm Lines	P&O Nedlloyd
First 4 months of 2000	39%	38%	25%
Calendar Year 2000	39%	38%	25%
Rate	\$ 3,550	\$ 3,000	\$ 2,760
Surcharges			
<u>BAF</u>	\$ 75	\$ 75	\$ 75
<u>ARB</u>			\$ 350
Harbor dues	\$ 400	\$ 400	
<u>THC</u>	\$ 250	\$ 250	\$ 375
Rate	\$ 4,275	\$ 3,725	\$ 3,560

Total weighted average: \$ 3,973
(Based on market share) (Based on market share)

BAF: Bunker Adjustment Factor
ARB: Arbitrary Charge
THC: Terminal Handling Charge

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