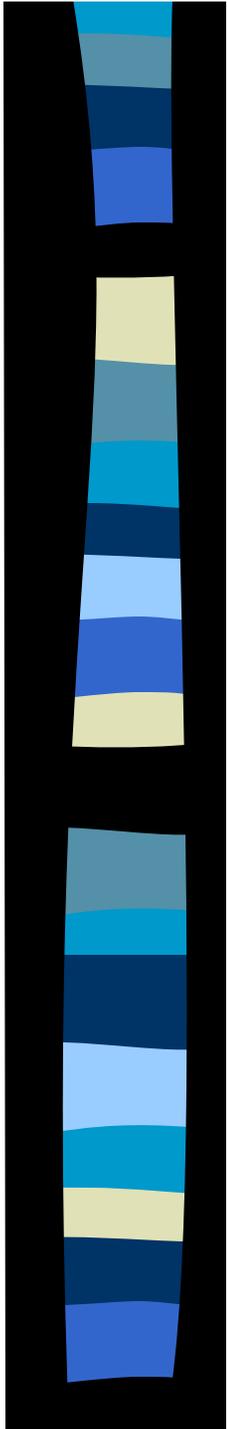
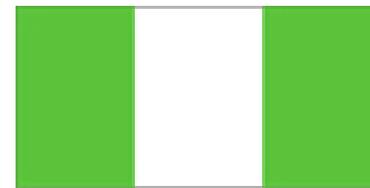
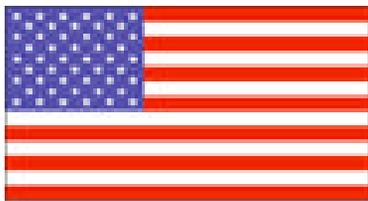


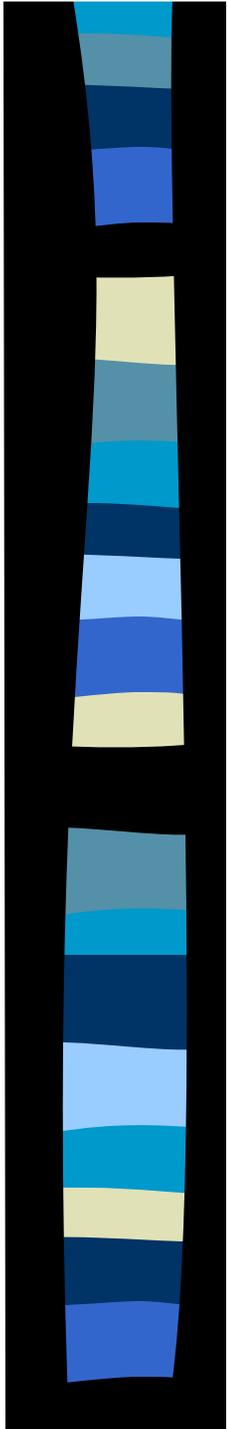
U.S. to Nigeria Agricultural Transportation

- Bulk & Container
- Shipping Patterns
- Shipping Costs
- Effective Transport Management (Increase Service/Lower Costs)
- Megatrends



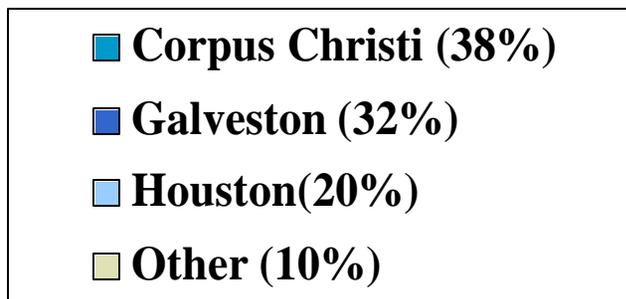
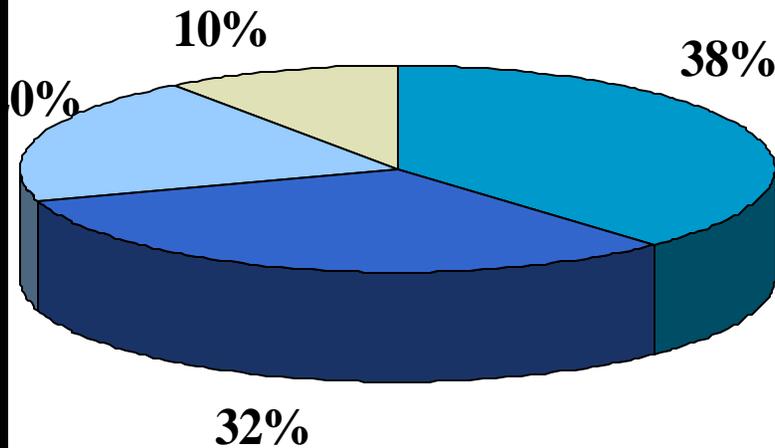


Bulk Shipments

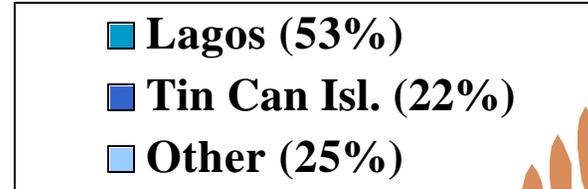
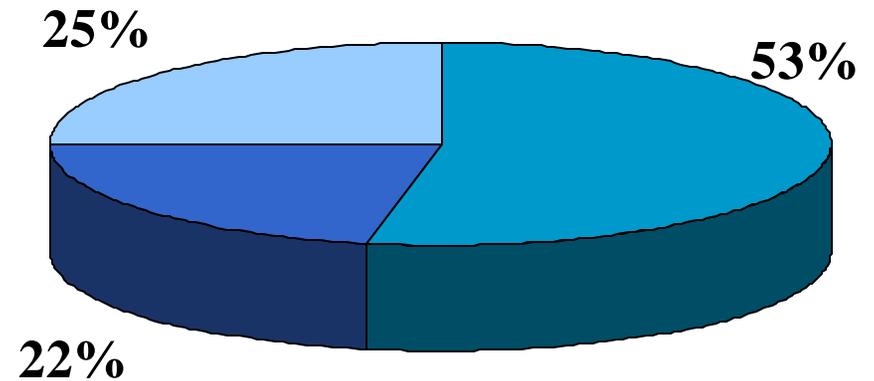


Bulk Ocean Transport Patterns

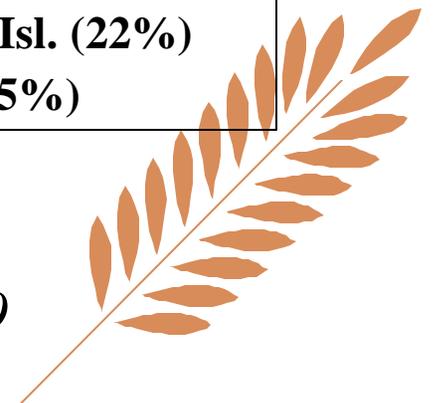
U.S. Port of Departure

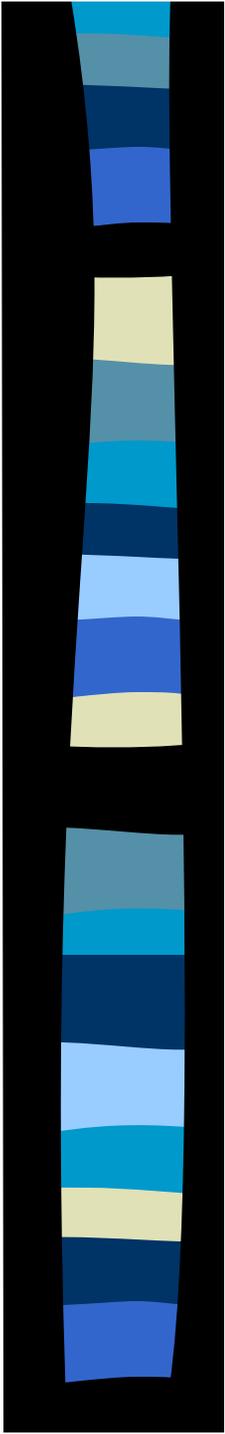


Nigeria Port of Entry



Source: *PIERS, Journal of Commerce, NY, 1999*





Bulk Ocean Transportation Costs

U.S. Gulf to Europe
(Panamax) \$13.31/ton

U.S. Gulf to Morocco
("handy size") \$17.16/ton

U.S. Gulf to W. Africa
("handy size") \$17.84/ton

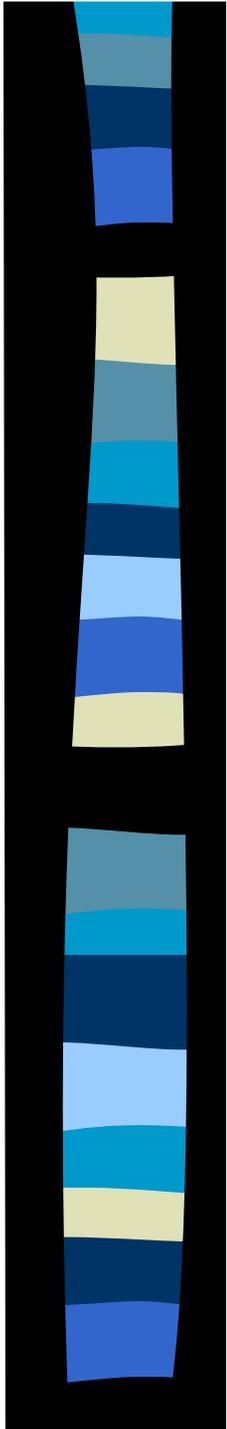
Cost Increase of 50% over 1998

Lowering Freight Costs for Bulk

- Increase ship size to Panamax
- \$5.00 to \$10.00 per ton savings
- Better unload/storage/take-away at receiving port



Containerized Shipments

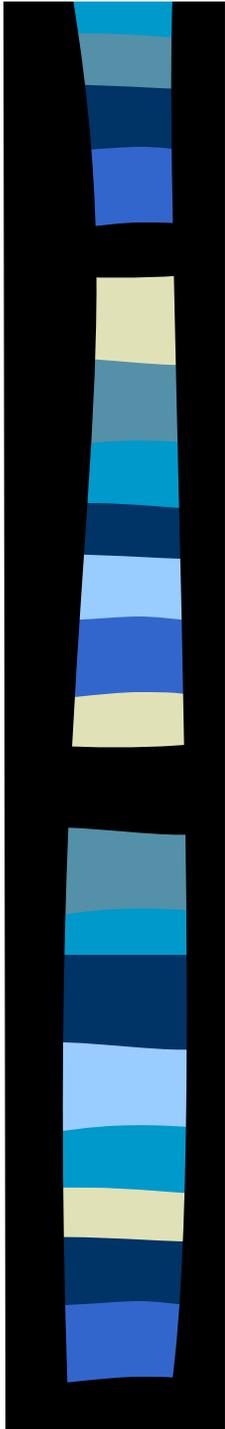


U.S. to Nigeria: Top Exports of Containerized Agricultural Products

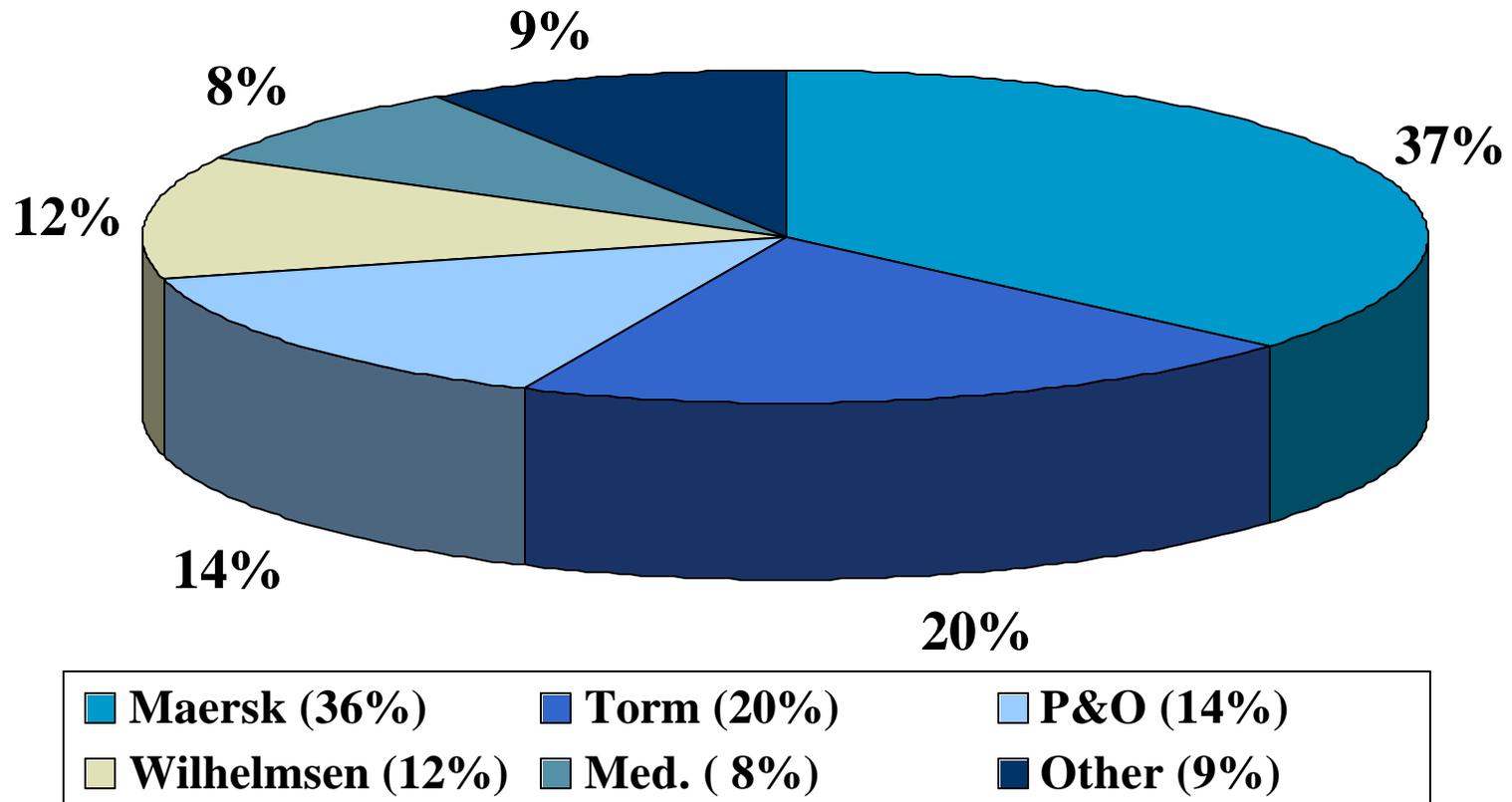
Commodity	TEU's*	Market Share
Tobacco	48	22%
Mixed groceries	28	13%
Dairy products (milk powder, ice cream)	25	12%
Fish meal	23	11%
Cereal, grain (hops, flour, noodles)	14	7%
Animal feed	13	6%
Herbs & spices (onion powder)	11	5%
Poultry (frozen)	10	5%
Nonalcoholic beverage (juice, water)	9	4%
Wine	9	4%
Other	25	12%
Total	214	100%

January-September 1999, PIERS Data, Journal of Commerce

**TEU: Twenty foot equivalent unit*

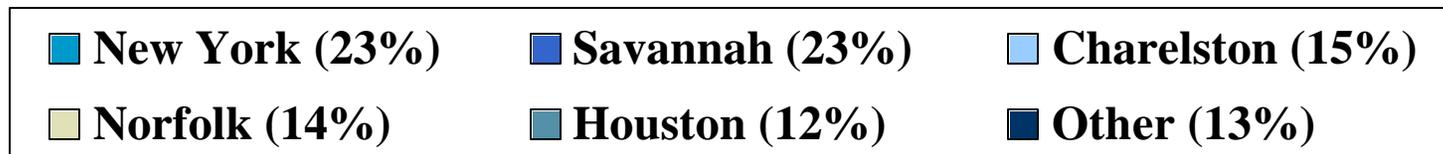
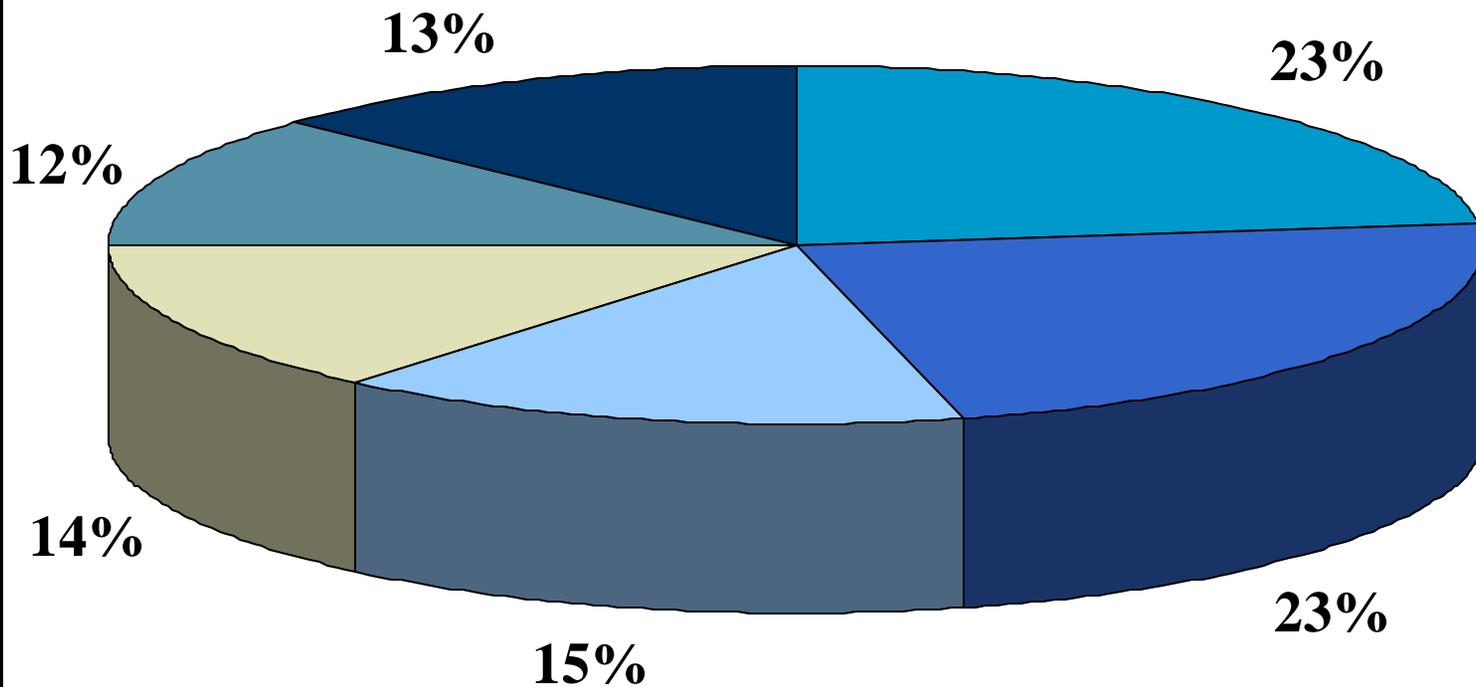


U.S. to Nigeria: Top Container Shipping Lines for Agricultural Products



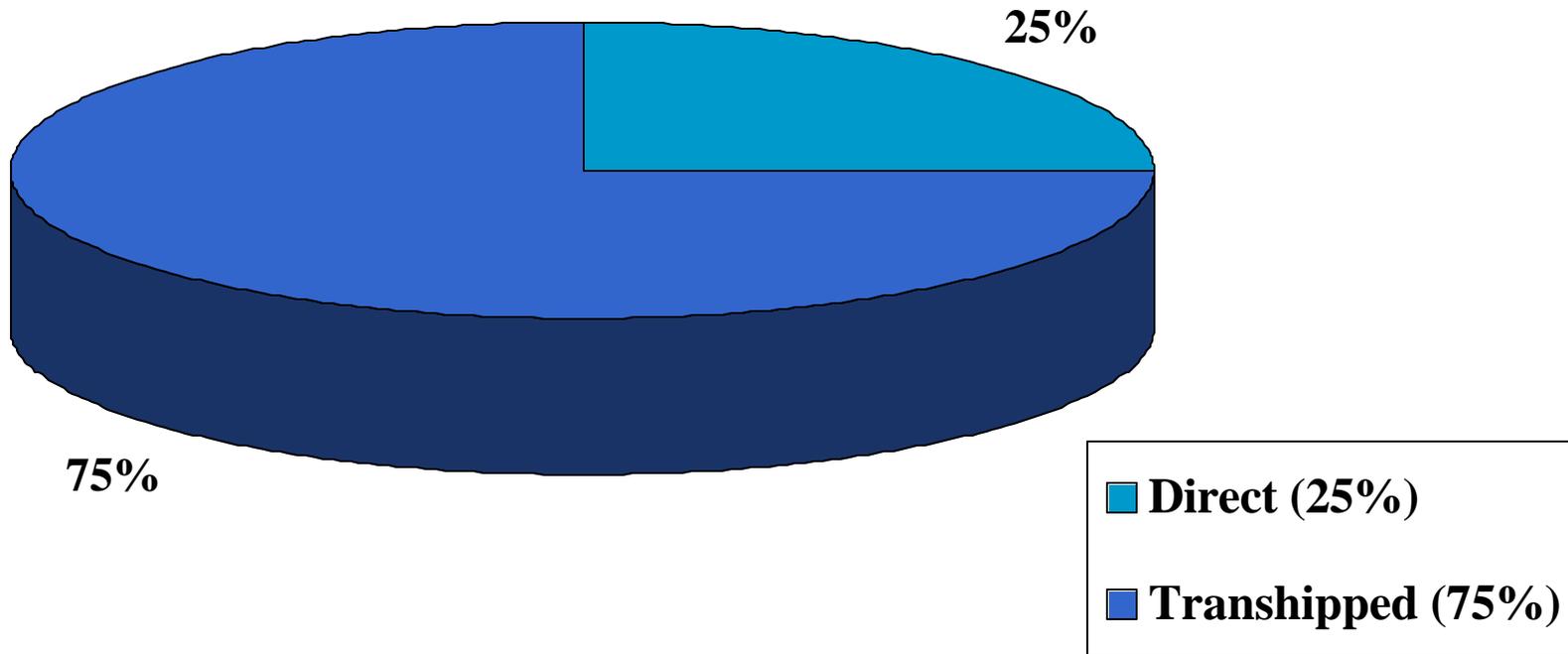
Source: PIERS, Journal of Commerce, NY, 1999

U.S. to Nigeria: Top Ports of Departure for Containerized Agricultural Products



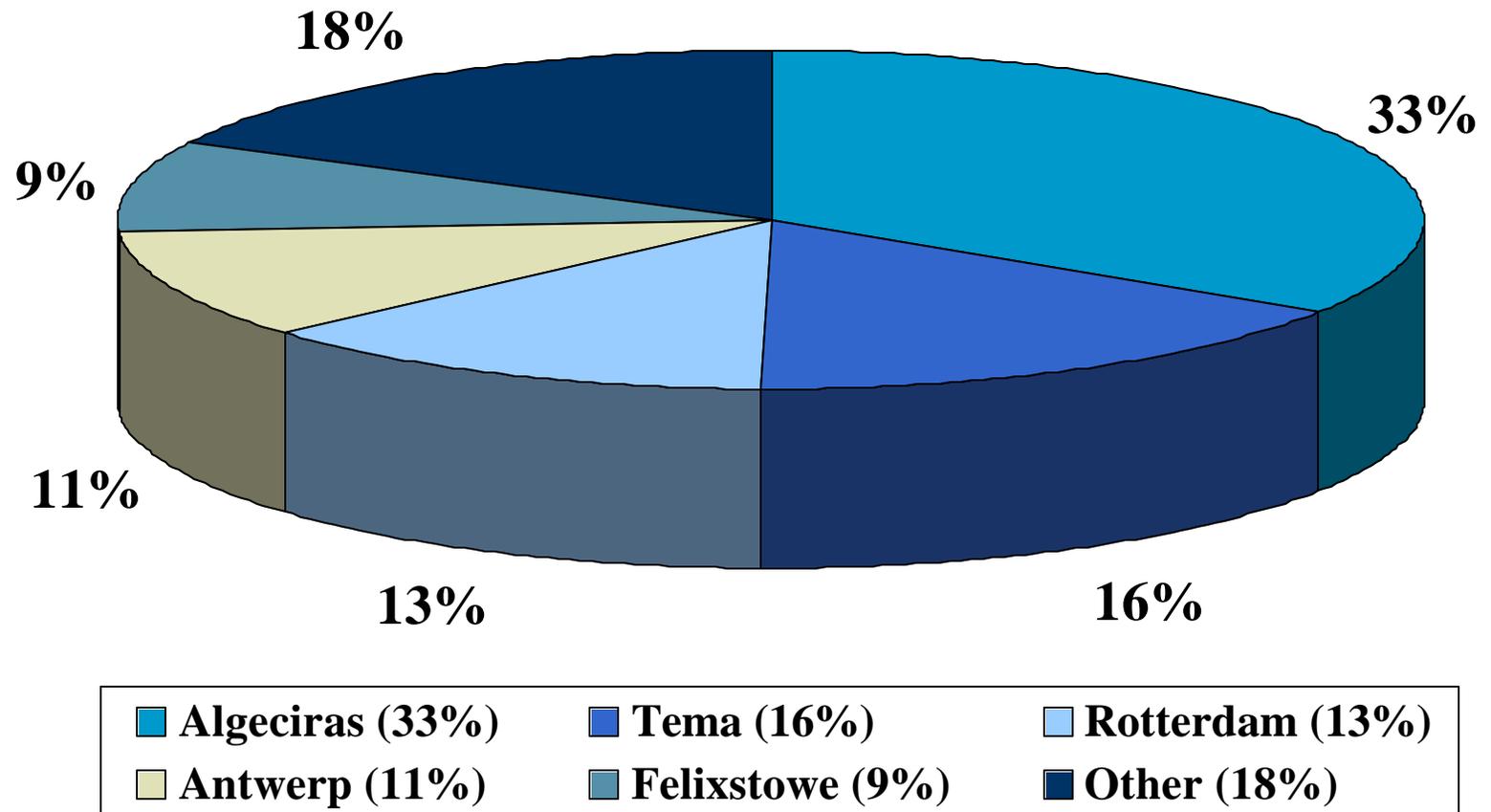
Source: PIERS, Journal of Commerce, NY, 1999

U.S. to Nigeria: Transshipment vs. Direct for Agricultural Products



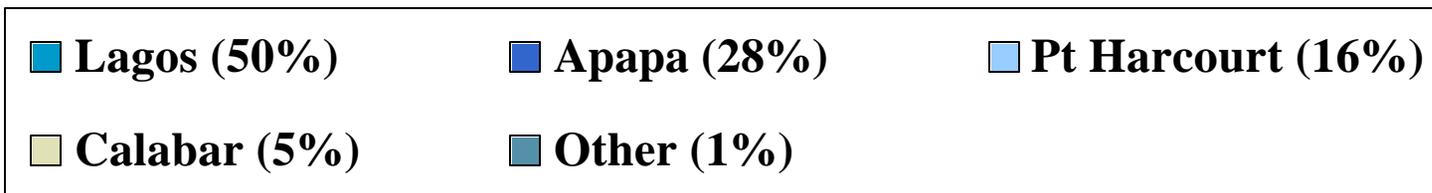
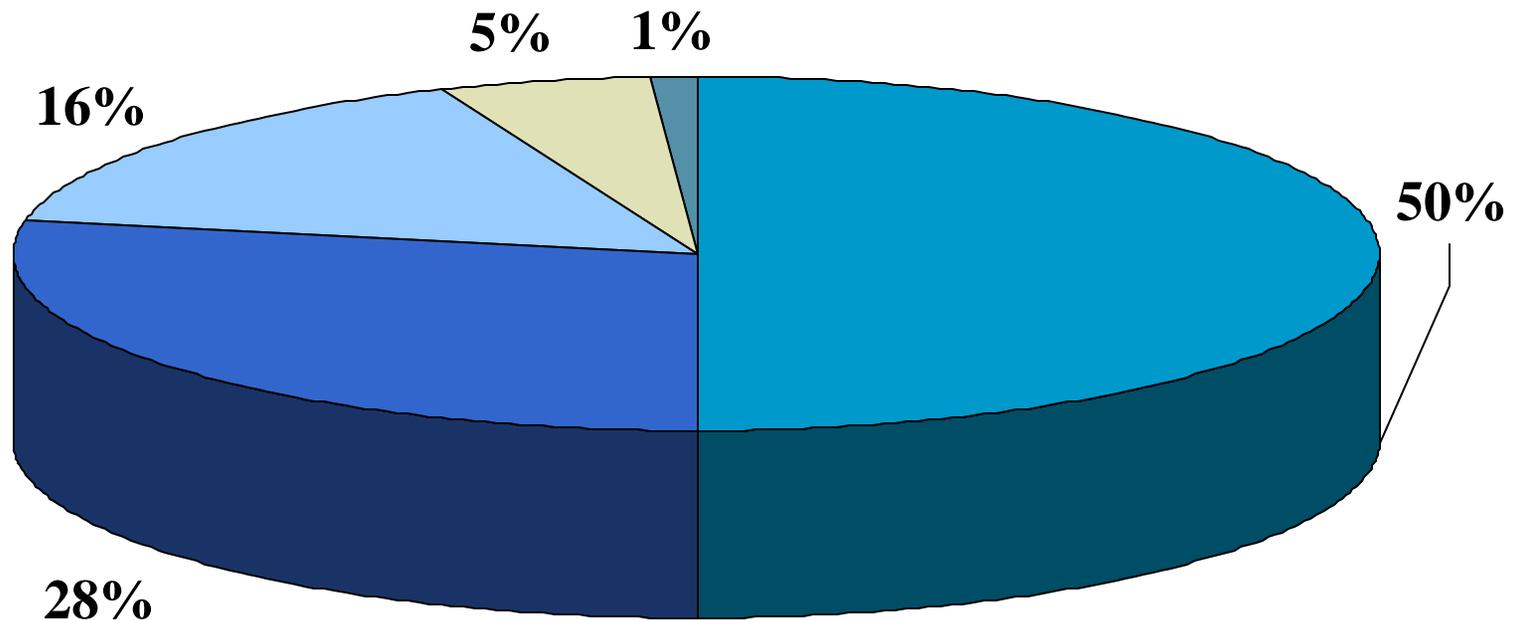
Source: PIERS, Journal of Commerce, NY, 1999

U.S. to Nigeria: Top Ports of Transshipment for Agricultural Products

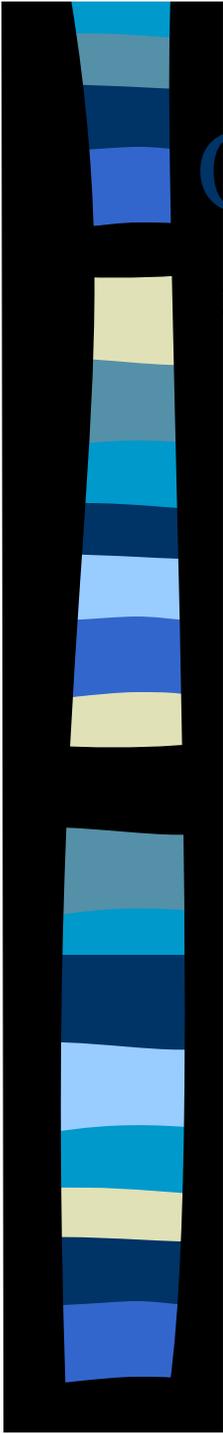


Source: PIERS, Journal of Commerce, NY, 1999

U.S. to Nigeria: Top Ports of Entry for Agricultural Products



Source: PIERS, Journal of Commerce, NY, 1999



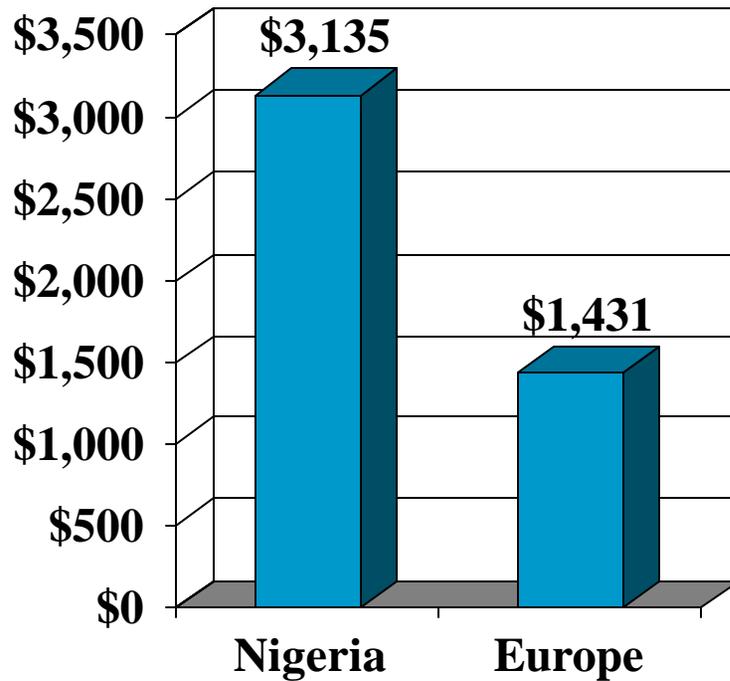
Ocean Freight Rates

Foodstuffs from New York to Apapa

<i>1999: TEU's 4</i>	Maersk	P&O Nedlloyd
Market share	50%	50%
Transit time	24 days	25 days
Base rate	\$6,450	\$3,450
Surcharges	THC: \$500 Harbor/port dues: \$800 BAF: \$120 Exchange Rate Surcharge: \$200	THC \$500
Ocean rate	\$8070	\$3950

*Per forty foot equivalent unit (FEU), CY-CY Service,
Public Rate for November 1999*

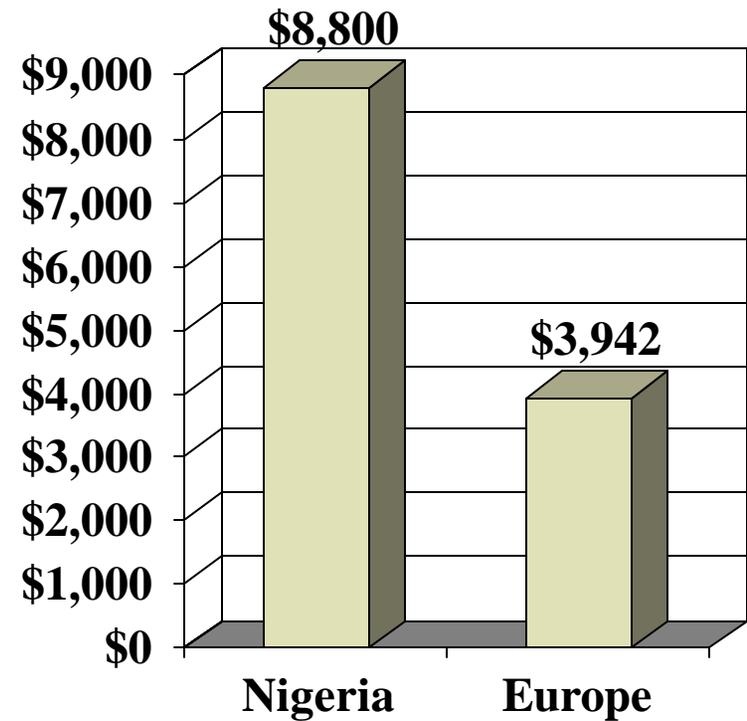
Container Ocean Freight Rates Nigeria vs. Europe



Grains/beans

(Per TEU, Nov. 1999)

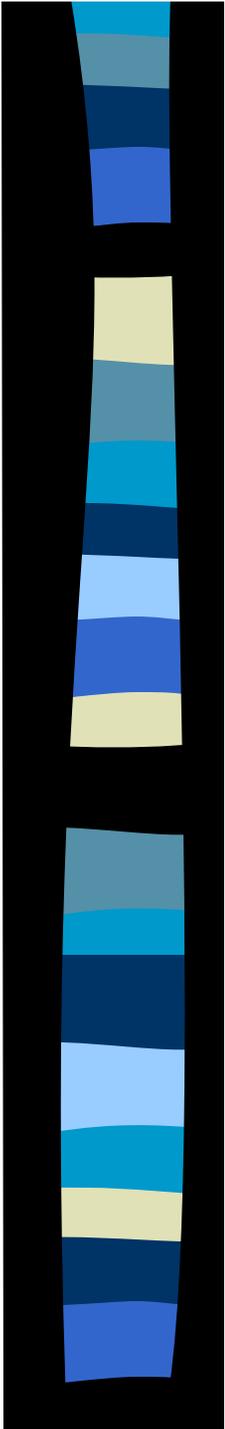
TEU: 20-foot equivalent unit



Poultry

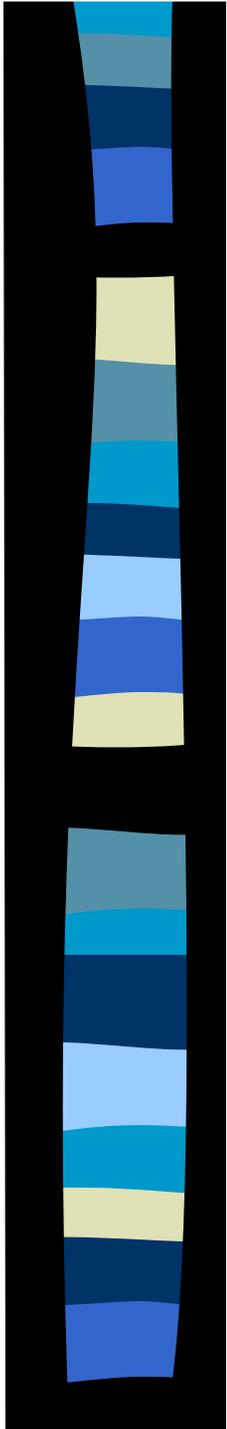
(Per FEU, Nov. 1999)

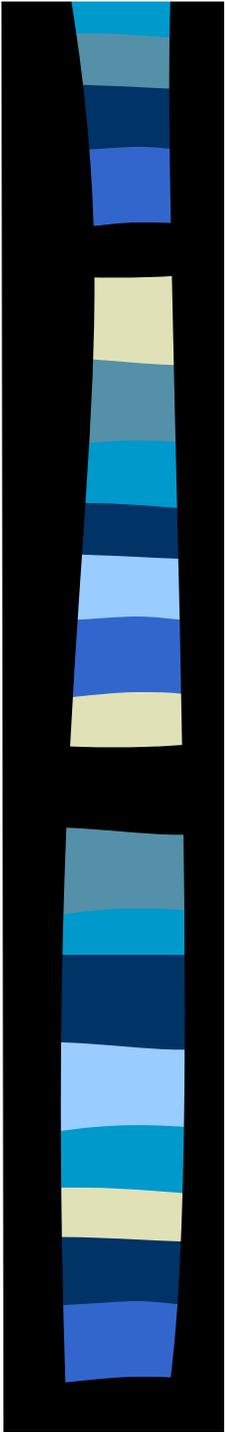
FEU: 40-foot equivalent unit



Managing Container Services/Costs

- Service Contracts
- Shippers' Associations
- Market Information
 - Grain Transportation Report
 - Ocean Freight Rate Bulletin
 - Directory of Freight Forwarders
 - Technical Publications





Megatrends

Bulk

- Volatile market
- Fuel
- Regional handling facilities

Container

- Lower costs
- Larger ships (6,000 TEU's)
- More efficient hub centers
- More efficient home port terminals
- U.S. regulatory changes
- Just-in-time, security and safety, identity-preserved grains, refrigerated products