



UNIVERSITY OF
FLORIDA

EXTENSION

Institute of Food and Agricultural Sciences

Comparative Marketing Costs for FCOJ from Florida and Sao Paulo¹

Ronald P. Muraro and Thomas H. Spreen²

Introduction

The states of Sao Paulo (Brazil) and Florida are the two dominant orange juice producing regions in the world. These two states collectively account for approximately 85 percent of the world's orange juice production. The market orientation of these two regions, however, is quite different. Florida sends most of its orange juice to U.S. and Canadian markets. A \$0.289 per pound solids tariff is imposed on orange juice imports from other countries. (Exceptions: The United States grants duty-free access to countries covered under the Caribbean Basin Economic Recovery Act, which includes Belize, Costa Rica, and Honduras; and the United States is scheduled to eliminate its tariff on Mexican orange juice imports by 2008 under the North American Free Trade Agreement). Brazil, on the other hand, has a small domestic orange juice market. Consequently, nearly all of the orange juice produced in Sao Paulo is exported to Europe, North America, and Asia.

This report analyzes the cost of delivering frozen concentrated orange juice (FCOJ) from Sao Paulo and Florida to the northeastern United States and

Europe. A discussion is presented on the implications of the duty-drawback mechanism that is available to U.S. FCOJ importers. Duty drawback is an important part of the strategy used by Florida orange juice processors in their attempt to compete in world markets.

Estimated FOB Costs of Bulk FCOJ Delivered to Florida Juice Processors

A comparison of the freight on board (FOB) costs of bulk FCOJ delivered to Florida juice processing facilities is shown in Table 1. The FOB costs are presented on a cost per pound solids basis. There are four cost categories comprising the FOB costs: delivered-in cost to processors, bulk processing costs, domestic costs, and foreign costs.

The 2000-01 delivered-in costs per pound solids were \$0.7849 per pound solids for Florida and \$0.4467 per pound solids for Sao Paulo. The bulk processing costs of FCOJ were estimated to be \$0.2034 per pound solids for Florida and \$0.1691 per pound solids for Sao Paulo. The two remaining cost items apply to FCOJ produced in Sao Paulo.

-
1. This is EDIS document FE363, a publication of the Department of Food and Resource Economics, Florida Cooperative Extension Service, Institute of Food and Agricultural Sciences, University of Florida, Gainesville, FL. Published February 2003. Please visit the EDIS website at <http://edis.ifas.ufl.edu>.
 2. Ronald P. Muraro, Professor and Extension Economist, Department of Food and Resource Economics, Citrus Research and Education Center, Lake Alfred, FL, and Thomas H. Spreen, Professor, Department of Food and Resource Economics, Florida Cooperative Extension Service, Institute of Food and Agricultural Sciences, University of Florida, Gainesville, FL.

The Institute of Food and Agricultural Sciences is an equal opportunity/affirmative action employer authorized to provide research, educational information and other services only to individuals and institutions that function without regard to race, color, sex, age, handicap, or national origin. For information on obtaining other extension publications, contact your county Cooperative Extension Service office. Florida Cooperative Extension Service/Institute of Food and Agricultural Sciences/University of Florida/Christine Taylor Waddill, Dean.

Domestic costs, which totaled \$0.0292 per pound solids, include transportation costs to the Port of Santos and storage and harbor charges at the port. Foreign costs include the U.S. tariff, FDOC equalization tax, ocean freight and insurance, USDA inspection, transportation from a Florida port, and miscellaneous other costs. The total foreign cost was \$0.4190 per pound solid. The total 2000-01 FOB costs for bulk FCOJ from Florida processing facilities were \$0.9882 per pound solids for Florida and \$1.0640 per pound solids for Sao Paulo. For a more detailed discussion of comparative costs for Florida and Sao Paulo, please refer to EDIS document FE364, Comparative Costs of Growing Citrus in Florida and Sao Paulo (Brazil) for the 2000-01 Season.

Estimated FOB Costs of Bulk FCOJ Delivered to Northeastern U.S. Markets

The northeastern United States is an important market for storing and shipping bulk FCOJ. To reduce FCOJ transportation costs, both Florida and Brazil store bulk FCOJ at storage facilities located in northeastern U.S. ports and ship FCOJ in ocean tanker ships from these ports.

The comparative cost of shipping FCOJ directly to the northeastern U.S. market is shown in Table 2. For Florida, a bulk transportation cost of \$0.070 per pound solids is added to the processing plant FOB cost of \$0.9883 per pound solids, resulting in a total cost of \$1.0583 per pound solids. The estimated total cost to deliver bulk FCOJ from Sao Paulo to the northeastern U.S. market is \$1.0341 per pound solids. The cost of shipping FCOJ directly from Sao Paulo to the northeastern United States is the same as the FOB cost delivered to a Florida processing plant less the FDOC equalization tax.

Estimated FOB/FOT Costs of Bulk FCOJ Delivered to European Markets from Florida and Sao Paulo

Europe is the second largest market for FCOJ in the world. Only the North American orange juice market (Canada, Mexico, and the United States) is larger. The cost of shipping bulk FCOJ from Florida and Sao Paulo to the European market is shown in

Table 3. There are two additional costs that Florida juice processors must incur to deliver FCOJ to Europe: transportation to the port and loading onto ocean freight ships. This cost is estimated at \$0.0183 per pound solids. Florida juice exporters do not have access to large bulk tanker ships and must rely on the four processors that have plants in both Sao Paulo and Florida to ship bulk FCOJ from Florida to other destinations. The ocean freight for shipping juice in these large bulk containers is \$0.1017 per pound solids. Therefore, the total cost to export bulk FCOJ from a Florida processor to the European market is \$1.1083 per pound solids.

The cost that a Brazilian orange juice exporter incurs to ship FCOJ to Europe is much less. The total cost to ship bulk FCOJ to the European market from Sao Paulo is \$0.7166 per pound solids. Note that the delivered costs from Florida and Sao Paulo to Europe do not include the European 15.2 percent ad valorem tax on the FOT value of FCOJ.

Effects of "Duty-Drawback Credits" on FOB/FOT Costs of Bulk FCOJ Delivered to European Markets

If the same quality and quantity of FCOJ is exported within a three-year period, a U.S. importer/exporter of FCOJ can avoid paying 99 percent of the U.S. FCOJ tariff. This provision in the tariff regulation is referred to as "duty drawback"; the amount that is available for an individual importer/exporter is called "duty-drawback credits". The effect that duty-drawback credits have on the cost of exporting Florida bulk FCOJ to Europe is shown in Table 4. Total FOB/FOT cost for delivering FCOJ to the European market from Florida is \$1.1083 per pound solids using bulk tank containers and \$1.0782 per pound solids if transported by bulk tanker ships. Subtracting the duty-drawback credits (\$0.2861 per pound solids) from the Florida total delivered-in costs results in a net delivered-in cost to Europe of \$0.8222 per pound solids for bulk tank containers and \$0.7921 per pound solids for bulk tanker ships. The comparative cost for transporting bulk FCOJ to Europe from Sao Paulo is \$0.7166 pound solids. Note that the European 15.2 percent ad valorem tax on the value of FCOJ is not included.

Concluding Remarks

The Brazilian citrus industry has a cost advantage in delivering bulk FCOJ to both the U.S. and European markets. The current U.S. FCOJ tariff has enabled Florida processors to be relatively competitive with Brazil for FCOJ shipped to the northeastern U.S. market. Without the duty-drawback provision in the tariff regulation, Florida processors would be unable to compete with Brazil in the European market. This report has attempted to demonstrate the importance and benefit of the U.S. FCOJ tariff to the profitability of Florida's citrus industry.

References

Muraro, R.P., F.M. Roka, and R.E. Rouse. 2001. Budgeting costs and returns for southwest Florida citrus production, 2000-01. Economic Information Report EI-01-06, Department of Food and Resource Economics, University of Florida, Gainesville, FL.

Muraro, R.P., T.H. Spreen, and F.M. Roka. 2000. The impact of the 1999 Brazilian devaluation on the delivered-in costs of oranges produced in Sao Paulo, Brazil. Extension Digital Information Source (EDIS) FE213, Department of Food and Resource Economics, University of Florida, Gainesville, FL.

Pozzan, Marcos (Montecitrus). 2001 and 2002. Discussions with citrus growers and industry representatives about citrus costs in Sao Paulo in 2001 and 2002. Sao Paulo, Brazil.

Spreen, T.H., and R.P. Muraro. 2000. The world market for citrus products and risk management for Florida citrus growers. Extension Digital Information Source (EDIS) FE195, Department of Food and Resource Economics, University of Florida, Gainesville, FL.

Table 1. Estimated FOB costs of bulk FCOJ delivered to Florida processors for Florida and Sao Paulo, 2000-01.

FOB Costs	Florida	Sao Paulo
	<i>\$/pound solids</i>	<i>\$/pound solids</i>
Delivered-In Cost	0.7849	0.4467
Bulk Processing Cost*	0.2034	0.1691
Domestic Costs	N/A	0.0292
Foreign Costs		
US FCOJ Tariff	N/A	0.2890
Florida DOC Equalization Tax	N/A	0.0299
Ocean Freight and Insurance	N/A	0.0716
USDA Inspection/Other Costs	<u>N/A</u>	<u>0.0285</u>
Total Foreign Costs	<u>0.0000</u>	<u>0.4190</u>
Total FOB Costs	0.9883	1.0640
* Estimated.		
Source: Ronald P. Muraro and Thomas H. Spreen (UF/IFAS). Refer to FE364.		

Table 2. Estimated FOB costs of bulk FCOJ delivered to northeastern US markets for Florida and Sao Paulo, 2000-01.

FOB Costs	Florida	Sao Paulo
	<i>\$/pound solids</i>	<i>\$/pound solids</i>
Delivered-In Cost	0.7849	0.4467
Net Bulk Processing Cost	0.2034	0.1691
In-Country BULK Transport, Port Storage, and Harbor Charges	N/A	0.0292
BULK Tanker Truck to Northeastern US	0.0700	N/A
Foreign Costs		
US FCOJ Tariff	N/A	0.2890
Ocean Freight and Insurance	N/A	0.0716
USDA Inspection/Other Costs	<u>N/A</u>	<u>0.0285</u>
Total Foreign Costs	<u>0.0000</u>	<u>0.3891</u>
Total FOB Costs	1.0583	1.0341
Source: Ronald P. Muraro and Thomas H. Spreen (UF/IFAS). Refer to FE364.		

Table 3. Estimated FOB/FOT costs of bulk FCOJ delivered to European market for Florida and Sao Paulo, 2000-01.

FOB Costs	Florida	Sao Paulo
	<i>\$/pound solids</i>	<i>\$/pound solids</i>
Delivered-In Cost	0.7849	0.4467
Net Bulk Processing Cost	0.2034	0.1691
In-Country BULK Transport, Port Storage, and Harbor Charges	0.0183	0.0292
Ocean Freight and Insurance		
Bulk Tanker Ship from Brazil	N/A	0.0716
Bulk Tank Container from US	<u>0.1017</u>	<u>N/A</u>
Total FOB/FOT Costs*	1.1083	0.7166

* Does not include European 15.2% ad valorem tax on FOB/FOT value of FCOJ.
Source: Ronald P. Muraro and Thomas H. Spreen (UF/IFAS). Refer to FE364.

Table 4. Effects of duty drawback on U.S. FCOJ tariff, European market, 2000-01.

Costs	Florida		Sao Paulo
	Bulk Tank Container	Bulk Tanker Ship	Bulk Tanker Ship
	<i>\$/pound solids</i>	<i>\$/pound solids</i>	<i>\$/pound solids</i>
Total FOB/FOT Costs	1.1083	1.0781	0.7166
Less "Duty-Drawback Credits" on US FCOJ Tariffs (\$0.2890 at 99%)*	<u>0.2861</u>	<u>0.2861</u>	<u>N/A</u>
Net Total FOB/FOT Costs Delivered to Europe**	0.8222	0.7921	0.7166

* Assumes citrus processor has duty-drawback credits to offset cost of shipping bulk FCOJ to Europe.
** Does not include the European 15.2% ad valorem tax on FOB/FOT value of FCOJ.
Source: Ronald P. Muraro and Thomas H. Spreen (UF/IFAS).