# Exporting McIntosh Apples from Massachusetts to Central America

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If McIntosh is accepted by Central American consumers, can Massachusetts apple growers export to Central America profitably? In order to answer this question, all procedures were put in place to export approximately 16,000 pounds of McIntosh apples to El Salvador in November of 2012. To export apples from Massachusetts to Central America, wholesalers should have the facilities to pack high quality apples and should also be prepared to manage high-quality fruit for long-distance marketing, including the use of Smartfresh, controlled atmosphere storage, and the other best handling practices and administrative procedures for exporting. In addition, growers should be aware of the varying currencies of Central America, besides El Salvador, whose currency is the US dollar. Despite these factors, many apple wholesalers see opportunities in these markets. These opportunities are notably attractive to the New England region, where there is a surplus of small and medium-sized apples which are the preferred apples of Central American consumers (see previous articles in this issue). The decision to export apples from Massachusetts to Central America becomes increasingly attractive if significant profits are involved.

In order to give growers real information about revenues and prices, this research allocated all costs that were specific to export sale for McIntosh from Massachusetts to Central America, which included tariffs, tax liabilities, transportation costs, warehousing costs, and destination costs. With the current cost structure to export apples to Central America, this study also analyzed which barriers to entry of those markets could affect the apple exportation from Massachusetts to Central America and the price for McIntosh apples in those markets. Regarding what price buyers in Central America are willing to pay, and taking into account that New England apples had not been sold previously in Central America, this research used a pricing approach referred to as pricing at the market, which requires setting the price equal to other sellers. For New England apples, this is a good starting point to understand the apple market structure in these countries, since the Central American market is dominated by two large competitors (WA State and Chile).

Table 1 provides real costs of this shipment es-

**Table 1. Costs through exporting one commercial container of McIntosh Apples in 2012 from MA to Central America**

| | Costs | Costs per lb | % Final Price | Costs | Cost per lb | % Final Price | Costs | Cost per lb | % Final Price |
|---|---|---|---|---|---|---|---|---|---|
| | 2012 | | | 2011 | | | 2010 | | |
| **Wholesale's FOB price** | $ 36,260.00 | $ 0.93 | 69% | $ 25,480.00 | 0.65 | 48% | $ 23,520.00 | $ 0.60 | 44% |
| Sea freight and insurance | $ 5,980.00 | $ 0.15 | | $ 5,980.00 | 0.15 | | $ 5,980.00 | $ 0.15 | |
| Landed Cost | $ 42,240.00 | $ 1.08 | | $ 31,460.00 | 0.80 | | $ 29,500.00 | $ 0.75 | |
| Import tariff | $ 402.55 | $ 0.01 | | $ 402.55 | 0.01 | | $ 402.55 | $ 0.01 | |
| **Transportation costs** | | $ 0.16 | 12% | | 0.16 | 12% | | $ 0.16 | 12% |
| **CIF price plus tariff** | $ 42,642.55 | $ 1.09 | | $ 31,862.55 | 0.81 | | $ 29,902.55 | $ 0.76 | |
| **Delays' costs** | $ 2,307.35 | $ 0.06 | 4% | $ 2,307.35 | 0.06 | 4% | $ 2,307.35 | $ 0.06 | 4% |
| **CIF plus cost for delays** | $ 44,949.90 | $ 1.15 | | $ 34,169.90 | 0.87 | | $ 32,209.90 | $ 0.82 | |
| **Distributor purchase price** | $ 30,909.20 | $ 0.79 | | $ 30,909.20 | 0.79 | | $ 30,909.20 | $ 0.79 | |
| **Total Incomes / losses** | $ (14,040.70) | $ (0.36) | -31% | $ (3,260.70) | $ (0.08) | -10% | $ (1,300.70) | $ (0.03) | -4% |
| **Distributor mark-up** | $ 6,330.80 | $ 0.16 | 12% | $ 6,330.80 | 0.16 | 12% | $ 6,330.80 | $ 0.16 | 12% |
| Retailer purchase price | $ 37,240.00 | $ 0.95 | | $ 37,240.00 | 0.95 | | $ 37,240.00 | $ 0.95 | |
| **Retailer margin percent** | $ 10,838.80 | $ 0.28 | 20% | $ 10,838.80 | 0.28 | 20% | $ 10,838.80 | $ 0.28 | 20% |
| **13% (Domestic taxes)** | $ 42,081.20 | $ 1.07 | 13% | $ 42,081.20 | 1.07 | 13% | $ 42,081.20 | $ 1.07 | 13% |
| **Consumer purchase price** | $ 52,920.00 | $ 1.35 | 99% | $ 52,920.00 | 1.35 | 100% | $ 52,920.00 | $ 1.35 | 102% |

**Source:** Personal communication with growers, shippers, marketers and consumers (2011, 2012). Invoices obtained throughout each level of the vertical channel from Massachusetts to El Salvador (Nov, and Dec 2012)

timated for a container (980 cartons) of McIntosh apples to be shipped from Massachusetts to El Salvador. For example, in 2012 the average FOB (Free on Board) price in Massachusetts was $0.93 per pound, or $37.20 per carton. This nominal price was $11.20 more than in 2011. The logistics costs to transport a container (980 cartons) of apples from the eastern US to El Salvador included phytosanitary permits, pallets, temperature record, container, inland freight, ocean freight, and inspection, and were lower than a container shipped from Washington State to El Salvador. The total transportation cost via container shipment was $5,980 from Wilmington Port, Delaware to Port of Castilla, which took 8 days by sea, and then 2 days by land from Honduras to San Salvador without any delays. In El Salvador, local costs included fees for inspection, import license, customs services, and labor costs, for a total about $402.55. The total cost of the container in El Salvador for the importer was about $42,642.55 plus $2,307.35 in delay cost, having a final cost of approximately $45.86 per carton.

The apples comprised 85% of the cost, and logistics and transportation were 15%. Using the strategy of pricing at the market, the discovery price was found to be at a FOB price of $26.40 per 40-pound bushel. This value is close to the higher priced apples in El Salvador; however, McIntosh apples still face barriers while trying to enter Central American markets. Central America is dominated by three firms that account for more than 70% of the region's total apple sales, making the Central American apple market behave like an oligopoly with a monopolistic fringe. This means that importers and distribution firms in Central America compete on more than just price, spending large amounts of money on advertising, packaging, and other marketing strategies. This situation makes the introduction of a new apple variety more difficult when a direct channel is used to export, as there is much competition.

Another barrier to entry is the government's system, which delayed inspection by El Salvador's Customs. This caused the CIF price to increase significantly because of the cost of the container and the need to keep it refrigerated. The supermarket where the apples were sold hired a local distributor that did not use the best handling practices for McIntosh apples, which may or may not have been intentional.

The most important concern regarding exporting apples is how they are handled at their destination, so to avoid potential problems, it is recommended that growers or brokers negotiate a FOB price where the importer takes the risk in Central America. Growers should also work with supermarkets with a good reputation and all the facilities needed to maintain apple quality.
One last barrier to entry is the rising crime rate which affects many businesses in Central America.

Despite these barriers to entry, our results indicate that in the market, most Salvadorian and Central American consumers prefer apples from 113 to 172 count. This preference could be due to the income levels or family sizes, and the variety preference could be due to Washington State apples' influence in the Central American market. However, US consumers prefer bigger apples, which gives an opportunity to New England growers to implement a price discrimination strategy in these separate markets. It is recommended to market apples 113 count and smaller in Central America, but in order to introduce McIntosh, the population should first be educated about McIntosh apples. Other apple varieties that are already known in Central America should also be exported. In addition, it is also suggested to have a sales person in the target market to take care of the consumers and buyers relationships.

While marketing small apples to Central Americans, this study indicates that Massachusetts wholesalers could competitively price small apples, revealing that Massachusetts apple growers could export to Central American markets profitably.

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