the port of WILMINGTON Delaware

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Case Study: Fresh Fruit Maroc

The Port of Wilmington's cargo management solutions speed up delivery time for Moroccan clementines from Fresh Fruit Maroc, increasing market share and boosting profits for them

Getting started

Several years ago, Fresh Fruit Maroc (FFM), a cooperative of Moroccan citrus fruit growers and exporters, selected the Port of Wilmington to handle a shipment of their clementines. The cargo was a small load, only about 2,000 tons (4 million pounds) of fruit, which was headed for stores in Canada. Today, thanks in large part to the collaboration with the Port of Wilmington, FFM's shipments of citrus now exceed 44,000 tons annually and FFM has become a prominent player in the North American clementine market.

The Port of Wilmington's strategies create early benchmark success

In 2000, FFM began exporting clementines for the Canadian marketplace through the Port of Wilmington using refrigerated ships, known in the trade as specialized reefer vessels. This type of ship is owned and operated by experts in the safe carriage of perishable cargo. Quickly after harvest in Morocco, the clementines are prepared for export, boxed up and loaded onto pallets at packing stations throughout Agadir and its environs, normally 360 -five-pound boxes are stacked on each pallet. From the packing stations, the fruit travels by truck to the Port of Agadir, where it is loaded in six to eight different temperature-controlled chambers of a specialized reefer ship. Each

chamber has the capacity to hold 300 to 500 pallets. The temperature in these chambers is kept at either 32° or 38° Fahrenheit for the 8 to 10 day transit between Agadir and the Port of Wilmington.

During this long-term relationship, FFM and the Port of Wilmington have implemented innovative techniques to make the import processes more efficient, including the development and introduction of a specialized bar code inventory management system with web capabilities, and the use of Wi-Fi-capable scanning equipment utilizing the Port's wireless network. This gave FFM more cargo visibility and control over inventory levels on a real-time basis which, in turn, enhanced delivery fulfillment and increased customer satisfaction. Within the first six years of this relationship, FFM achieved a seasonal record of 35,000 tons.

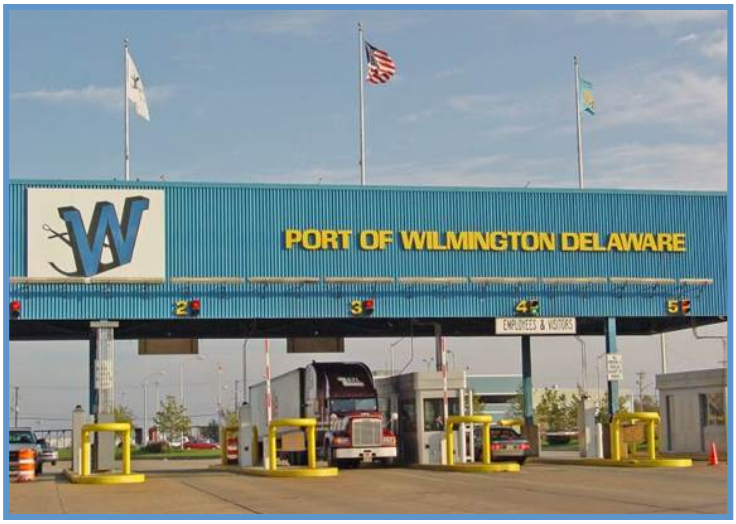
Moroccan clementines for the U.S. market experience heavy delays when shipped in containers

Almost all citrus fruit imported to the U.S. market must undergo the USDA mandated cold treatment (CT) protocol, during which the fruit is held at 32 degrees Fahrenheit for 15 days. This process is required to prevent unwanted pests from entering the U.S. Temperature logs are required and are inspected by USDA officers to prove the consistency of the temperature during the prescribed treatment period. In addition, U.S. Customs and Border Protection, Agricultural Specialists (CBP-Ag) conduct a random cutting sample of the fruit to verify the efficacy of the CT. Fruit for the Canadian market does not require CT, but must be safeguarded and separated from other fruit while in the Port's cold storage warehouses, and must be shipped "in bond" under a U.S. Customs seal directly to a U.S.-Canada border crossing and ultimately to the Canadian receiver.

Prior to 2011, FFM members imported clementine cargo for the U.S. market in containers transported by liner shipping services, calling at the Ports of New York/New Jersey. The CT was accomplished in the shipping containers during the ocean voyage.

Containerized Moroccan clementines were transported on ships that carried different types of cargo, visited several ports before reaching its ultimate destination and often these containers had to be trans-shipped on board different ships via ports in the southern Mediterranean. This added unnecessary extra days to their voyage and made the delivery date unpredictable.

Often, port congestion and waiting times for inspections added several more days to the overall delivery time. **The whole process, from departure at Agadir though customs clearance and cargo release to the importers in the U.S., could take as long as 45 days.** This was simply too long, since the clementines were losing shelf life and, consequently, commercial value as they sat on the dock. Importers were having great difficulty managing the timing of their sales promotions for this delicious fruit. These factors ultimately resulted in lower FFM profits.



The "Cool Port" saves time and money

Nicknamed the "Cool Port," the Port of Wilmington offers its customers the largest on terminal refrigerated warehouse complex and is the Number 1 fresh fruit seaport in the U.S. The Port specializes in the management of perishable cargo and adding efficiency to the Cold Chain. Seeking to reduce the amount of time to bring its clementines to the U.S. market, FFM approached the Port of Wilmington to manage the CT in this important growth market. With the Port's guidance, FFM shipped its U.S. and Canadian-bound cargo on the same ships. But, the U.S. fruit was loaded in separate chambers with the hatches sealed during the journey, and with the temperature set at 32° so that, upon discharge, it would be precooled and ready to start the CT process.

This new shipping arrangement reduced the clementines' time to market from 45 days to 25 days.

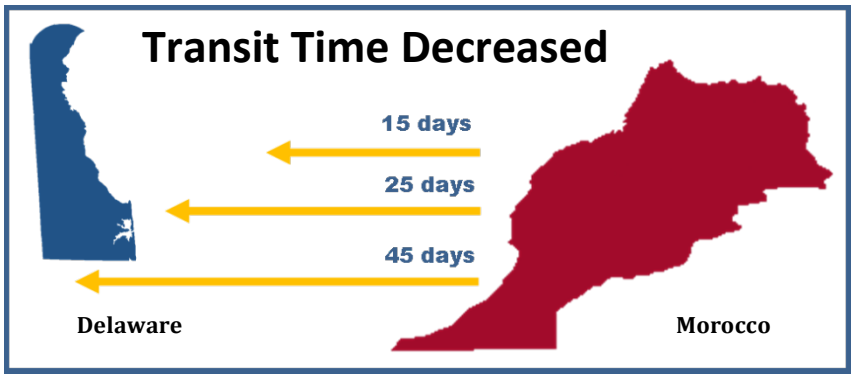
The Port of Wilmington unloaded the U.S. cargo first so that it would begin CT immediately upon arrival. This new shipping arrangement **reduced the clementines' time to market from 45 days to 25 days.** Also, with the Port's sophisticated inventory management technology, FFM was able to track the fruit's progress through the CT process and to provide customers with a more accurate port pickup time. As a result, FFM was able to offer a fresher product, as well as enhanced customer service. This led to increased demand in the U.S. market for the Moroccan clementines, and cargo volumes have steadily increased.

Greater efficiencies

The voyage from Agadir, Morocco by ship takes eight to ten days. The entire logistics process, including loading the cargo, traveling by ship, and then unloading the cargo, takes between 12-16 days (at the high end, the exact length of time needed for the completion of the cold treatment).

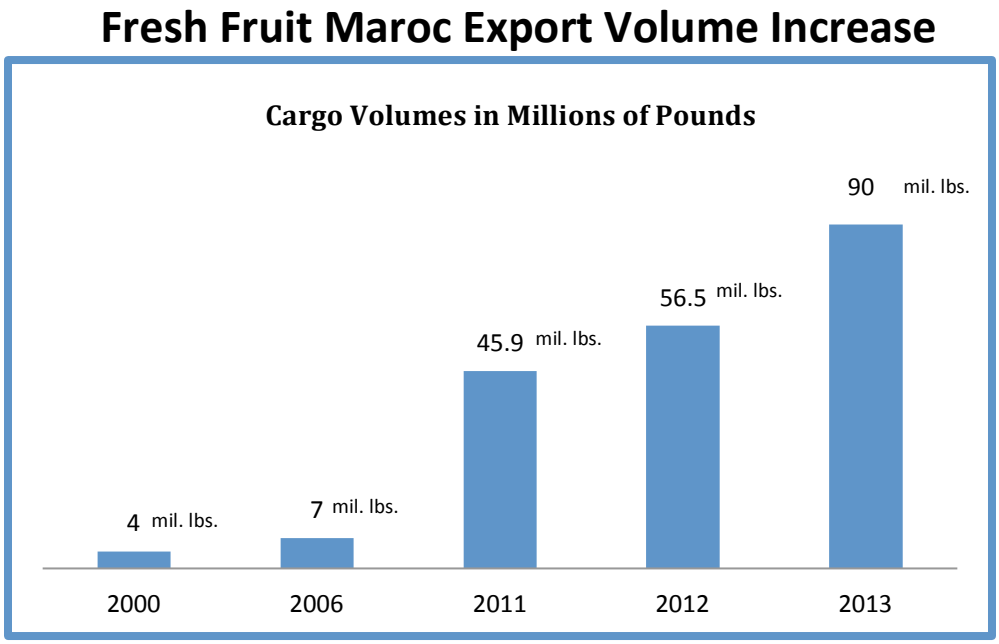
In 2012, buoyed by the Port's successful CT program and satisfied U.S. receivers, FFM decided to begin the CT process on board the ships headed to the Port. FFM's U.S. market fruit was pre-cooled in Agadir and then loaded first in the lowest compartments of the ship (according to break bulk method). The Canadian cargo was loaded in upper compartments and was not co-mingled with the U.S. cargo. By employing onboard CT, the U.S.-bound clementines were ready to be unloaded into the Port of Wilmington's cold store warehouses upon completion of the required inspections by USDA and CBP-AG, and to be picked up by importers for delivery to retail stores.

This **on-board CT process reduced the entire delivery time to market from 45 days when shipped in containers to 15 days on specialized reefer ships.** This shortened supply chain contributed to FFM's explosive growth in volume to over 44,000 tons at the Port of Wilmington during the 2013 season.



Conclusion

The implementation of the Port of Wilmington's cold treatment service **shortened the transit time** from harvest to retail display by almost half. That successful experiment enabled FFM to embark on a shipborne CT process which again **reduced the time-to-market**, increasing the quality of FFM's clementines and improving its service to importers.



As a result of this collaboration between the Port of Wilmington and Fresh Fruit Maroc, FFM's brand has become well known and respected in the U.S. and Canada and the tonnage that FFM exports to North America has **jumped from 2,000 to 45,000**. FFM and the Port of Wilmington continue to seek new opportunities to expand their relationship and to build upon their successful commercial partnership.