



## Ocean Spray

### BY SHIPPING PRODUCT MORE EFFICIENTLY, COMPANIES CAN REDUCE BOTH COSTS AND EMISSIONS

This is a real-life example of how Ocean Spray, a \$2.2 billion-dollar agricultural cooperative and household-name fruit juice and food manufacturer, cut carbon emissions from its distribution operations in the US southeast by 20 percent while driving down the transport costs of supplying that market by 40 percent. It did this by making simple and inexpensive changes to the company's logistics practices.

#### Background

Freight transport accounts for 15 percent of corporate carbon emissions, making it one of the largest sources of business-related CO<sub>2</sub> pollution in the U.S'. Long-entrenched inefficiencies in transportation arrangements also cause unnecessary consumption of fuel, not to mention avoidable expense.

Ocean Spray, an agricultural cooperative owned by more than 700 cranberry growers in North America and Chile, and 35 Florida grapefruit growers, is one of North America's largest producers of bottled juices and juice drinks. Over the years, the company has made a conscious effort to identify and act upon opportunities to drive down its transportation costs. As a direct result, with only a modest investment of time and money, the company significantly reduced its carbon footprint and intends to continue doing so.

#### Striving for network optimization

Companies are constantly redesigning their transportation networks to better serve their customers and reduce transportation costs. Because demand for its products in the Southeast was growing, Ocean Spray decided to open a new distribution center in Lakeland, Florida, in 2011.

By centralizing supply closer to demand, Ocean Spray reduced the number of truck-miles needed to distribute its products to customers, resulting in lower transportation costs and, as a significant additional benefit, a reduction in carbon emissions.

#### An intermodal opportunity

Additionally, the location of the new Lakeland distribution center created an intriguing opportunity to further reduce carbon emissions and costs.

Working through an existing logistics partner, Wheels Clipper, Ocean Spray became aware that another juice company was paying to move empty rail cars via the CSX railroad from New Jersey to Florida, on their way back after delivering product—something the freight industry calls a “back haul”. These back-haul situations occur all the time, and they present a great chance to maximize efficiency by filling empty trucks or trains that are returning to where they are needed, reducing expenditure of money and fuel all around. Wheels Clipper and its customer were looking for a partner to take advantage of the empty backhaul capacity. Much of Ocean Spray's product coming into the Lakeland, FL distribution center originated in New Jersey. It seemed a perfect fit.

This case study is part of a series featuring leading companies in a variety of industries that are finding opportunities to reduce carbon emissions and cut transportation costs through improved logistics practices. Environmental Defense Fund sponsored this series to highlight opportunities and to call on companies to improve the carbon-efficiency of logistics networks. The analysis for this series was conducted by researchers with the Center for Transportation and Logistics at the Massachusetts Institute of Technology.

# MIT-EDF CASE STUDY SUMMARY

But there were two challenges in this particular situation. First off, it involved switching a large amount of Ocean Spray freight from road to rail, which meant substantially increasing the size of each shipment, since rail boxcars can take up to three times the cargo of a standard freight truck. Second, the Wheels Clipper customer they'd be coordinating with was one of Ocean Spray's juice manufacturing competitors.

Luckily, both companies decided they could work together, with Wheels Clipper acting as a firewall, so that no sensitive information would leak out on either side. They all agreed to give it a try.

## Making the switch from road to rail

The Florida based manufacturer had around 175 rail boxcars per week going on back-haul from New Jersey to Florida, plenty of capacity to handle Ocean Spray's freight requirements.

The arrangement was appealing for practical, geographical regions.

- In New Jersey, Ocean Spray's distribution center in Burlington is approximately 60 miles from the CSX rail terminal where the empty boxcars were stationed.
- At the Florida end, the new Lakeland distribution center is 65 miles from the destination CSX terminal in Bradenton.

Although Ocean Spray has years of experience with intermodal transport, shipping via box car meant the juice cooperative had to make several adjustments.

- A shipment of fruit juice from New Jersey to Florida takes three days by truck, and four to five days by rail. The increased shipping time required changes in order-fulfillment planning.
- Ocean Spray and the other juice manufacturer had to rely on Wheels Clipper to act as an intermediary between them, responsible for coordinating pickup and delivery so that it fell within the required time windows for both companies.



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- Ocean Spray changed its load planning to accommodate the freight capacity of the rail boxcars, which have higher cargo volumes than truck trailers—increasing order size to 38 pallets, instead of 19.
- New logistics arrangements were needed to accommodate the extra drayage, i.e. the short-leg shipment via truck to rail yard.
- To guarantee on-time delivery of all shipments, Ocean Spray needs to carefully track the location of shipments at all times.

## Results

Over a 12-month period, Ocean Spray shifted 80 percent of its freight traffic between New Jersey and Florida—616 truckloads or 308 boxcars—over to the new 'backhaul' route. As a result, it saved an estimated 40 percent on transportation costs in that lane, or about \$200 per load. It also saved over 1,300 metric tons of carbon dioxide, giving a 68 percent reduction, equivalent to saving over 100,000 gallons of fuel. Added to the benefits from the new distribution network, Ocean Spray has reduced its carbon footprint for these operations by 20 percent.

The initial impetus for these changes was cost-savings and efficiency, with the reduction in carbon emissions coming as an added benefit. In the future, however, Ocean Spray plans to include carbon savings when evaluating its transportation decisions.

By following the examples of leading shippers, we can create a future where freight transport remains affordable, results in reduced greenhouse gas emissions, and minimizes pollution's threat to public health.



<sup>1</sup>By end-source. Analysis based on U.S. Energy Information Administration Annual Energy Outlook 2012, Table 19. Energy-Related Carbon Dioxide Emissions by End Use. June 25, 2012

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