

Cutting 'food miles' doesn't necessarily pay

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As food suppliers attempt to meet the growing demand for local products, a new study finds it's not always economically or environmentally viable for multi-product industries to focus heavily on local sales.

"The dairy sector is an excellent example for examining the [economic consequences](#) of increased localization of food supply chains," said Miguel Gomez, professor of applied economics and management and co-lead author of "Cost of Localizing a Multi-Product Food Supply Chain: Dairy in the United States," published in the April issue of the journal [Food Policy](#).

The study developed an [economic model](#) for the U.S. dairy industry that examined assembly, interplant transportation, processing and distribution for all dairy products, including milk, yogurt, cheese and butter. It showed that the average distance traveled for all U.S. dairy products was about 320 miles from farm to market. Scenarios were developed to compare effects of increasing local sales, focusing on reducing weighted average source distance, a unit of measurement comparable to food miles.

"We find that increased localization reduces assembly costs while increasing processing and distribution costs," said Gomez. "The weighted average source distance for some products decreased at the expense of increases in other products."

The study also found that although small reductions in food miles are not

relatively costly to the supply chain, reductions of more than 45 miles produce larger cost increases. In one scenario, reducing the average distance traveled of beverage milk by 10 percent required a 30 percent increase in overall food miles for all other dairy products.

"This study is one of the first to examine food miles from a systems perspective, and to explicitly account for the short-term costs of localization across multiple related products. It shows there are tradeoffs, that localizing is not as simple to achieve as it might seem," said Charles Nicholson, adjunct professor of [applied economics](#) and management and co-lead author of the study.

The study provides insights to the U.S. [dairy industry](#), which in 2008 planned to reduce its greenhouse gas emissions 25 percent by 2025, in part through supply chain reductions.

"Our study highlights that localization initiatives must be considered carefully. In fact, localization may not be the best venue to reduce carbon footprint in the case of dairy," said Gomez.

Provided by Cornell University

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