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Case Studies Show Value of Foods Produced in the Northeast

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This article summarizes some of the results of a large, multi-state project, “Enhancing Food Security in the Northeast through Regional Food Systems (EFSNE)” The full bulletin can be found at:

“Case Studies of Supermarkets and Food Supply Chains in Low-Income Areas of the Northeast: A Cross Case Comparison of 11 Case Studies.” By Kristen S. Park, Miguel Gómez, and Kate Clancy, Extension Bulletin 2018-02, published by Charles H. Dyson School and Applied Economics and Management, Cornell University and the Northeast Regional Center for Rural Development at Penn State. (<https://dyson.cornell.edu/outreach/extension-bulletins/documents/Cornell-Dyson-eb1802.pdf>)

Introduction

The goal of the “Enhancing Food Security in the Northeast through Regional Food Systems (EFSNE)” Project, which you can access [here](#), was to better understand how regional food systems might address food security challenges in the region. As part of this USDA-funded project, researchers conducted [11 case studies](#) to identify and measure a sample of regional versus non-regional food supply chains. The supply chains served participating supermarkets in low-income neighborhoods in five urban and four rural locations in the Northeast.

Researchers collected price margins (defined as the sale price minus the purchase price) for the following 7 food items: fresh apples, fresh potatoes, fresh cabbage, milk, ground beef, canned peaches, and frozen broccoli. They then calculated the economic activity generated by the companies in the supply chains in the form of aggregation and transportation. Each food item was studied in at least two different stores.

The researchers assessed how regional supply chains for these products are configured, how they operate, and how they compare to non-regional supply chains on transportation efficiency, share of retail price, and addition to economic activity. A regional supply chain was

defined as one where the product is produced or grown in the region.

Findings

The Northeast region is an important producer of many of the food items, notably apples, cabbage, and fluid milk. It also produces potatoes for fresh consumption and for processing as chips and some cattle for beef processing. The region does not manufacture commercial volumes of canned peaches or frozen broccoli. A most notable, new finding is that a significant proportion of many of the food items that were purchased by the stores were produced within the Northeast (Table 1).

Table 1. Percent of Stores' Selected Food Items Produced in the Northeast

Food Item	% of stores' purchases produced regionally	Regional production as a % of U.S. production
Apples	77%	16%
Cabbage, fresh	40%	20%
Potatoes	39%	5% ¹
Ground beef	n/a	n/a
Milk	100%	15% ²
Peaches, processed	0%	0%
Broccoli, fresh and processed	0%	0%

¹ Fresh and processing potatoes

² Includes all dairy products

The milk supply chains were entirely regional; no non-regional chains existed. Even though many of the stores' apples, potatoes, and cabbages were grown in the region, their supply chains were not any shorter than their non-regional counterparts. In other words, whether the supply chain was regional or non-regional did not affect the number of actors in the supply chain.

Past researchers have examined the food miles traveled by some specific products into a given market area. In the EFSNE study, regional supply chains had substantially fewer food miles and transportation costs than non-regional supply chains. And in each of the metrics used to evaluate transportation, distance, efficiency and cost as a percent of retail price, regional supply chains were shorter geographically, more efficient, and less costly than their non-regional counterparts (Table 2).

Table 2. Regional versus Non-Regional Supply Chain Transportation Metrics

Product	Gallons		Gallons per cwt		Truck miles		Transportation cost- % of retail price	
	regional	non-regional	regional	non-regional	regional	non-regional	regional	non-regional
Apples	43	339	0.11	0.85	259	2,035	2.2	9.1
Cabbage	42	210	0.23	0.59	321	1,319	5.1	8.5
Potatoes	120	322	0.31	0.82	730	1,951	6.4	21.2
Ground beef	116	183	0.36	0.46	693	1,096	2.9	3.3
Milk	22	na	0.29	0.00	186	na	0.5	na
Canned peaches	na	na	0.00	0.55	na	3,261	na	6.1
Frozen broccoli	na	102	0.00	0.26	na	2,435	na	10

Despite the frequent availability of regionally produced products, many of these products were often not well labeled with information about where the product was grown. Transparency did not emerge as a major theme in supply chain interviews. Most stores did not know the origin of each of their products. In general, stores have more difficulty in knowing where products originate when their supply chains have multiple layers of intermediaries.

Conclusions

These case studies illuminate the extent to which regionally produced and non-regionally produced items are reaching independent supermarkets in low-income areas. The full study profiles the food items and explores the particular dynamics of each product in relation to its path to the study supermarkets.

The food supply chains in the U.S. are highly efficient in many ways. Yet emerging issues in food transparency, food waste, transportation costs and inefficiencies, and environmental impacts, along with growing interest in self-reliance may exert pressure on supply chains to change.

An opportunity may exist for supply chain members to work collaboratively to identify regionally sourced perishable products (e.g., apples, cabbage, milk, potatoes). Prominent labels and signage may increase the sale of these and other regionally produced products. Stores may still need to rely on their wholesalers to coordinate regionally grown products. In this case, labeling products at the farm-level would be extremely important in order to maintain the identity of the product through the supply chain.

This study both shows the need and opens the door for more research on many other foods. The research makes a substantial contribution to understanding the system which can lead to beneficial policy and marketplace changes in the Northeast food system.

About the EFSNE project

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