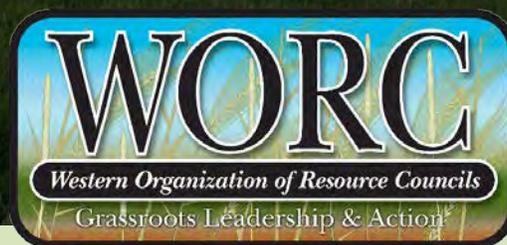

SOWING THE SEEDS OF SUSTAINABILITY

UNDERSTANDING LOCAL FOOD SYSTEMS IN THE WEST



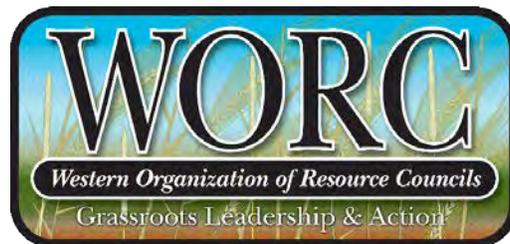
WESTERN ORGANIZATION OF RESOURCE COUNCILS

About this Report

This report is a publication of the Western Organization of Resource Councils (WORC). This report was prepared by Diya Nagaraj and edited by Sara Kendall and Liz Moran Stelk. All views and opinions expressed in this report are those of WORC and do not necessarily reflect the views of WORC's funders. Any errors are the responsibility of WORC.

About WORC

WORC is a regional network of grassroots community organizations that include 12,700 members and 39 local chapters. WORC's network includes: Dakota Resource Council (North Dakota); Dakota Rural Action (South Dakota); Idaho Organization of Resource Councils; Northern Plains Resource Council (Montana); Oregon Rural Action; Powder River Basin Resource Council (Wyoming); Western Colorado Congress and Western Native Voice (Montana). WORC's mission is to advance the vision of a democratic, sustainable, and just society through community action. WORC is committed to building sustainable environmental and economic communities that balance economic growth with the health of people and stewardship of their land, air, and water.



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Executive Summary

This paper examines the local food systems in seven states in which the Western Organization of Resource Councils (WORC) has member groups – Colorado, Idaho, Montana, North Dakota, Oregon, South Dakota and Wyoming. Using publicly-available data, we analyzed multiple aspects of food systems in order to understand where each state stood, in terms of the strength of both the production and demand side of the local food market.

According to the data, direct-to-consumer marketing is decreasing or at least plateauing, but intermediated sales through restaurants, grocery stores, schools, food hubs and other channels are growing in popularity. Farm-to-school participation rates vary greatly across states with some states having over 50% of school districts with a farm-to-school program, but there is still significant room for growth. In addition, farmers' markets are increasingly able to accept federal benefit programs such as the Supplemental Nutrition Assistance Program (SNAP), leading to increased SNAP redemptions at markets. However, we identified that actual redemptions totaled less than 1% of potential SNAP redemptions, highlighting another growth opportunity for the local food system.

We conclude that, although there are some concerning trends with the decrease of direct marketing and small farms earning a surprisingly small share of the local food market, farm-to-school expansion and better inclusion of benefit recipients can help local food systems expand and thrive.

Introduction

The purpose of this paper is to use publicly available data from a variety of sources to determine a baseline for and patterns of local food production, consumption, and marketing in the seven-state WORC region: Colorado, Idaho, Montana, North Dakota, Oregon, South Dakota, and Wyoming. The goal of the report is to identify opportunities for development and expansion of local food sales, and potential policy solutions that WORC's member groups could pursue to promote local food in their states. This report addresses general trends in farming and direct sales, public investment in local food – including farm-to-school and institutional procurement – and food insecurity, and lists some potential policy solutions.

The local food movement has become increasingly visible in recent years. Whether through farmers' markets, community supported agriculture programs (CSAs), or farm-to-school activities, the local food system is intertwined with the lives of many consumers. Local food systems base themselves on sourcing produce, meat, dairy, and other items from a limited geographic area. Although there is no consensus regarding the distance at which a food product is considered locally produced, there is growing awareness that buying foods from the surrounding areas boosts local economies, limits the carbon footprint of the purchase, and creates stronger ties between farmers and consumers.¹ As a result of the rise in attention afforded to this sector of the agricultural industry, research, especially by the U.S. Department of Agriculture (USDA), has increased.

¹ *Why Buy Local*, <http://buylocalpa.org/why-buy-local/> (accessed August 6, 2016).

What is the “Local” in Local Food?

For this report, “local” refers to an agricultural product produced and consumed within the same state, as it creates consistency with state government policy. No universal definition of local in “local food” exists. Instead, various consumers, farmers, researchers, and organizations set their own definitions for their own purposes. The state of Oregon, for example, considers anything grown or processed within the state to be “local.” “Local” often serves as a description for marketing strategies like farmers’ markets, CSAs, and farm-to-school, where direct relationships between producers and consumers exist. The federal government defined “local” in the Food, Conservation, and Energy Act of 2008, saying, “The term ‘locally or regionally produced agricultural food product’ means any agricultural food product that is raised, produced, and distributed in – (I) the locality or region in which the final product is marketed, so that the total distance that the product is transported is less than 400 miles from the origin of the product; or (II) the State in which the product is produced.”²

² *Food, Conservation, and Energy Act of 2008*, Public Law 246, U.S. Statutes at Large 122 (2008): 1929.

Data Sources

The USDA serves as the primary resource for data and information on local food, and the agency provides data sets and statistics offering insight into different aspects of the local food system. These four datasets provided most of the information within this report:

- **USDA Census Data** makes up the largest collection of data on farming in the US, and is accessible by county. It contains a section on direct marketing, participation in CSAs, and farmers' markets, which allows for the study of trends in direct-to-consumer sales and how those trends compare to the overall agricultural sector. A 2008 census of organic farms allows for some comparison with more general direct marketing trends. The most recent census is from 2012.
- The **Know Your Farmer, Know Your Food (KYF2)** database contains mostly grant data about local food projects that received funding from USDA. The database allows us to see the federal investment in a state's local food production and if there is a relationship between funding and the strength of the local food sector in the state. It is accessible by county, city, and zip code, and includes the details of each funded grant application.
- **Farm-to-School** dataset contains the survey responses from the 2012 farm-to-school survey performed by USDA's Food and Nutrition Service. Listed by school district, it includes almost every variable needed to study the relationship between schools and the local food system. Information available includes whether districts currently run a program or plan to begin a program, where they source their food, what products they consume, and, if they lack a procurement policy, why they do not source local food.³
- **Food Environment Atlas** dataset, compiled by USDA's Economic Research Service, combines information on socioeconomic factors with food data, so it includes data on farmers' markets, grocery stores, CSAs, etc. for each county, as well as data about food insecurity, health factors, and access to various food sources.

³ During the course of writing this report, the USDA released data for the 2014-15 farm-to-school survey. Unfortunately, there was not time to rewrite the code and produce updated statistics.

Understanding General Trends

This section presents overall trends in local food production and consumption that show the general state of local food systems within WORC's region. The goal is use USDA data to provide a better understanding of the issues surrounding local food.

For our look at "local food," we want information about farms that participate in direct-to-consumer marketing; direct-to-institution marketing (including sales to restaurants, hospitals, schools, and government offices), and food hubs; otherwise sell their produce to a local distributor, co-op, wholesale or retail market; or use any type of intermediated marketing strategy. However, no single data set effectively covers all of these categories and provides overall sales information on both direct and intermediated sales, the most complete economic measure of the local food system. The USDA plans to release the data from their first-ever Local Food Marketing Practices Survey in December 2016, which is anticipated to provide more information on the topic. However, until that becomes publicly available, existing statistics on direct marketing and other facets of the local food system must be relied on to fill this gap.

Trends in farms participating in direct marketing

Following national trends, the overall number of farms decreased in most states in the region between 2007 and 2012 (Figure 1). In South Dakota and Wyoming, however, the total number of farms increased. Despite the general downward trend, the number of farms participating in direct-to-consumer marketing increased in every state in the region except North Dakota. Even there, the percent decrease has been lower than the decrease in the overall number of farms, indicating that farms participating in direct marketing may be more resilient. In South Dakota and Wyoming, the number of direct-to-consumer farms increased by a greater percentage than the total number of farms. This suggests that farmers responded to growing demand for local food and greater interaction between producers and the wider community. This either arose from new farmers choosing to utilize direct marketing, or established farms shifting their sales strategies to match consumption trends.

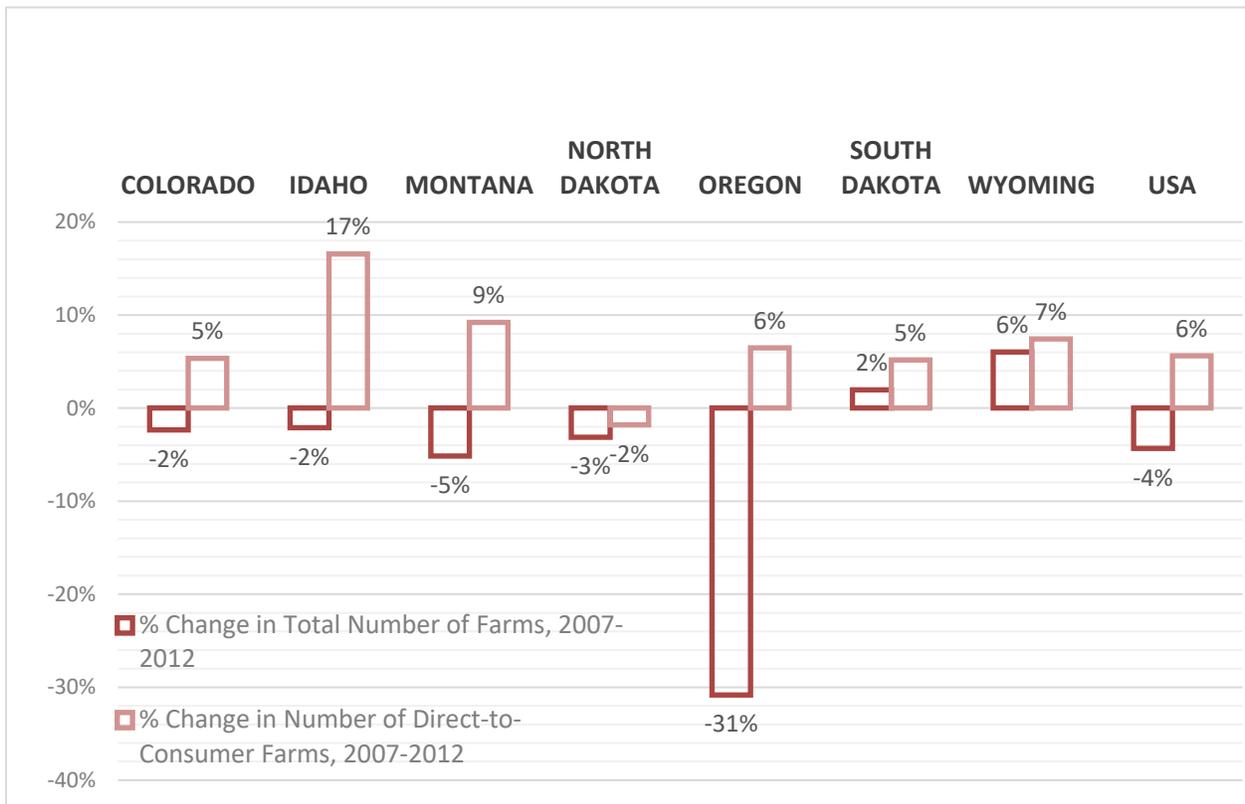


FIGURE 1: CHANGE IN THE NUMBER OF FARMS, 2007-2012. (SOURCE: 2007 AND 2012 USDA CENSUSES)

Drops in Sales-Per-Farm from Direct Marketing

Comparing the value of direct-to-consumer sales to the number of farms participating in direct-to-consumer marketing between 2007 and 2012 reveals other concerning trends (Table 1). It appears that, although the number of farms involved in direct marketing increased, the overall value of direct sales shrunk, and that the average value of sales-per-farm also dropped. Idaho and Montana saw some increase in overall value of direct sales, but only Montana saw an increase in direct-to-consumer sales value per farm. This trend may indicate that the direct-to-consumer market may be saturated, or it may be a short-term plateau due to the economic downturn or other factors. It is also clear that growing consumer demand for local food is being met by grocery stores, food hubs or other intermediated sales, discussed in the next section. The United States as a whole showed a slight increase in direct-to-consumer sales per farm, and the national sales per farm showing that WORC’s region is perhaps struggling slightly more than other parts of the country.

	# of Farms, 2007	# of Farms, 2012	Trend	Direct-to-Consumer Sales Value, 2007	Direct-to-Consumer Sales Value, 2012	Trend	Sales per Farm, 2007	Sales per Farm, 2012	Trend
CO	2777	2896	↑	\$ 22.5 million	\$ 19.2 million	↓	\$ 8,132	\$ 6,629	↓
ID	2076	2420	↑	\$ 7.8 million	\$ 8.5 million	↑	\$ 3,776	\$ 3,522	↓
MT	1287	1389	↑	\$ 6.3 million	\$ 9.4 million	↑	\$ 4,911	\$ 6,784	↑
ND	444	433	↓	\$ 2.4 million	\$ 1.9 million	↓	\$ 5,471	\$ 4,471	↓
OR	6274	6680	↑	\$ 56.4 million	\$ 44.2 million	↓	\$ 8,983	\$ 6,613	↓
SD	752	791	↑	\$ 6.1 million	\$ 4.3 million	↓	\$ 8,189	\$ 5,498	↓
WY	645	693	↑	\$ 3 million	\$ 3 million	↓	\$ 4,690	\$ 4,355	↓
US	136817	144530	↑	\$1.2 billion	\$1.3 billion	↑	\$8,853	\$9,063	↑

TABLE 1: CHANGE IN THE NUMBER OF DIRECT-TO-CONSUMER FARMS AND VALUE OF DIRECT-TO-CONSUMER SALES, 2007-2012
(SOURCE: USDA 2007 AND 2012 CENSUSES)

	Direct-to-Consumer Sales per Capita (2007)	Direct-to-Consumer Sales per Capita (2012)	Trend
CO	\$ 4.70	\$ 3.70	↓
ID	\$ 5.21	\$ 5.34	↑
MT	\$ 6.55	\$ 9.38	↑
ND	\$ 3.72	\$ 2.76	↓
OR	\$ 15.14	\$ 11.33	↓
SD	\$ 7.78	\$ 5.21	↓
WY	\$ 5.65	\$ 5.23	↓
USA	\$ 4.02	\$ 4.17	↑

TABLE 2: DIRECT-TO-CONSUMER SALES PER CAPITA, 2007-2012 (SOURCE: USDA 2007 AND 2012 CENSUSES)

Looking at direct-to-consumer sales per capita shows a more varied trend and a more positive comparison to the entire U.S. (Table 2). For example, despite Idaho’s decrease in direct sales per farm, per capita direct sales increased, suggesting that, increasing consumer demand can counteract the negative impact new farms entering a limited market have on sales per farm. In addition, in 2012, almost every state in WORC’s region with the exceptions of Colorado and North Dakota, had direct-to-consumer sales above the national average, suggesting that consumers in this

region are generally buying more produce directly from farmers than consumers nationally. This suggests that consumers in this region are generally buying more produce directly from farmers than nationally. However, we should not overlook some of the dramatic decreases that took place over that five-year period, including in Oregon, where direct sales per capita dropped about \$4. Therefore, although this suggests that consumers have not entirely lost their taste for buying directly from the producer, there is the need to reinvigorate the market and continue its growth.

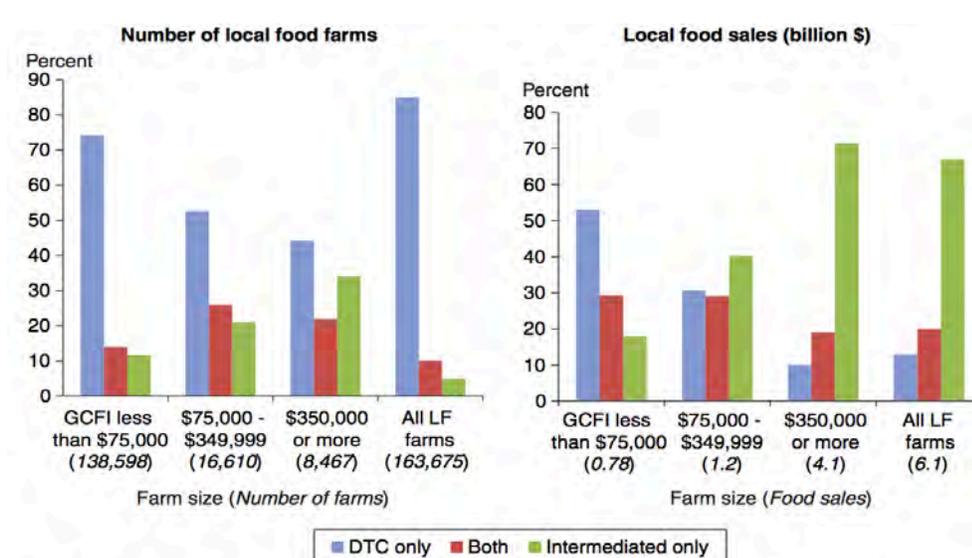
Currently, there is an existing and growing market for local foods, as evidenced by studies and qualitative observations. This market draws more producers to it, given seemingly large demand. While this demonstrates an interest on the production side to grow the local food system, it also suggests the need for simultaneous efforts to expand the direct market on the

consumer side and expand access to intermediated local markets for smaller farmers. Otherwise, growing farmer competition for direct-to-consumer sales will continue to reduce the average direct sales per farm and might, in the long term, push producers out of the local market.

Having a growing number of farmers participating in direct-to-consumer marketing without equal growth on the consumer side means that competition reduces profits and might, in the long term, push producers out of the local market as well.

The Recent Growth of Intermediated Marketing Channels

According to USDA estimates, total U.S. local food sales increased from \$4.8 billion in 2008 to \$6.1 billion in 2012. Since direct-to-consumer marketing appears to have declined recently, this trend is primarily linked to the growth of intermediated marketing channels, such as grocery stores, food hubs and farm-to-school programs. The USDA estimates that 2012 local food sales through direct-to-consumer channels were around \$1,152 million versus \$3,349 million for intermediated sales.⁴ During the study, the USDA Economic Research Service also found significant disparities in farm sales among local food farms when accounting for farm size. About 85% of all farms selling locally have less than \$75,000 in gross cash farm income (GCFI), and they only account for 13% of total local food sales. In addition, farms which use at least some intermediated marketing earn a larger share of local food sales, even after accounting for



the difference in sales classes (Figure 3).⁵ Therefore, we need new strategies to help smaller, direct-to-consumer farms capture a larger market share.

Note: The share of farms by farm size and marketing channel use are based on 2012 Census benchmark counts; the
FIGURE 2: LOCAL FOOD FARMS AND SALES BY FARM SIZE AND MARKET CHANNEL USE (SOURCE: LOW, S.A., ET. AL., TRENDS IN U.S. LOCAL AND REGIONAL FOOD SYSTEMS, USDA ERS, JANUARY

⁴ U.S. Department of Agriculture, Economic Research Service, *Trends in U.S. Local and Regional Food Systems*, by S.A. Low, A. Adalja, E. Beaulieu, N. Key, S. Martinez, A. Melton, A. Perez, K. Ralston, H. Stewart, S. Suttles, S. Vogel, and B.B.R. Jablonski, <http://www.ers.usda.gov/media/1763057/ap068.pdf>, 9.

⁵ Ibid, 10.

Is Direct Marketing for Organic Farms Plummeting?

The USDA has completed a census of organic agriculture, allowing us to observe the strength of organic producers (both certified and exempt) within the local food system.⁶ The market for direct-to-consumer sales of organic produce appears to have decreased, perhaps for economic reasons; only North Dakota saw an increase in

Only North Dakota saw an increase in organic producers using direct-to-consumer marketing and the total number of organic farms decreased in every state.

organic producers selling directly to consumers (Table 3). The total number of organic farms decreased in every state as well. In addition to direct-to-consumer marketing, many farms stopped using direct-to-retail marketing, with a decrease of about 75% in South Dakota. This trend reflects the national stage, where the number of organic farms involved in either direct-to-consumer or direct-to-retail marketing dropped. The attractiveness and convenience of intermediated marketing channels may have contributed to these trends. There have, however, been some increases in the percent of organic sales occurring either locally (< 100 miles) or regionally (100-500 miles) versus nationally (> 500 miles). For example, local sales in Colorado jumped from 28.4% in 2008 to 75% in 2014. This suggests that, even if direct marketing is no longer as profitable and attractive to organic producers, the push to sell products closer to home rather than on the national level remains. The expense and time-consuming process involved in the USDA's Organic Program could also contribute to the decrease seen here, where more farms are practicing sustainable agriculture but not being certified.

	Consumer Direct Sales (# of Farms), 2008	Consumer Direct Sales (# of Farms), 2014	Direct to Retail/Institution (# of Farms), 2008	Direct to Retail/Institution (# of Farms), 2014
Colorado	172	70	55	52
Idaho	117	67	50	39
Montana	101	33	59	42
North Dakota	10	15	6	6
Oregon	493	289	261	154
South Dakota	19	15	8	2
Wyoming	27	12	12	1
United States	8,833	6,382	3,900	3,502

TABLE 3: CHANGE IN THE NUMBER OF ORGANIC FARMS INVOLVED IN DIRECT-TO-CONSUMER AND DIRECT-TO-RETAIL MARKETING, 2008-2014 (SOURCE: USDA 2008 AND 2014 ORGANIC CENSUSES)

⁶ A farm or business is classified as being "exempt" from organic certification if, annually, they have less than \$5,000 gross organic sales.

Direct Sales Only Comprise a Small Fraction of Total Sales

There was an across-the-board decrease in direct sales as a percentage of overall sales between 2007 and 2012 (Figure 2). During this time, only Oregon was above the national average, but it also had the biggest drop in direct sales. Individual counties within states vary, with many significantly better or worse than the average for the state. For example, in South Dakota, direct sales in Tripp and Brookings Counties dropped from about 0.75% of total sales to less than 0.06%, while for the state it only changed from 0.1% to 0.046%. On the other hand, direct sales in Custer County increased from 0.27% to 0.73% of total farm product sales.⁷

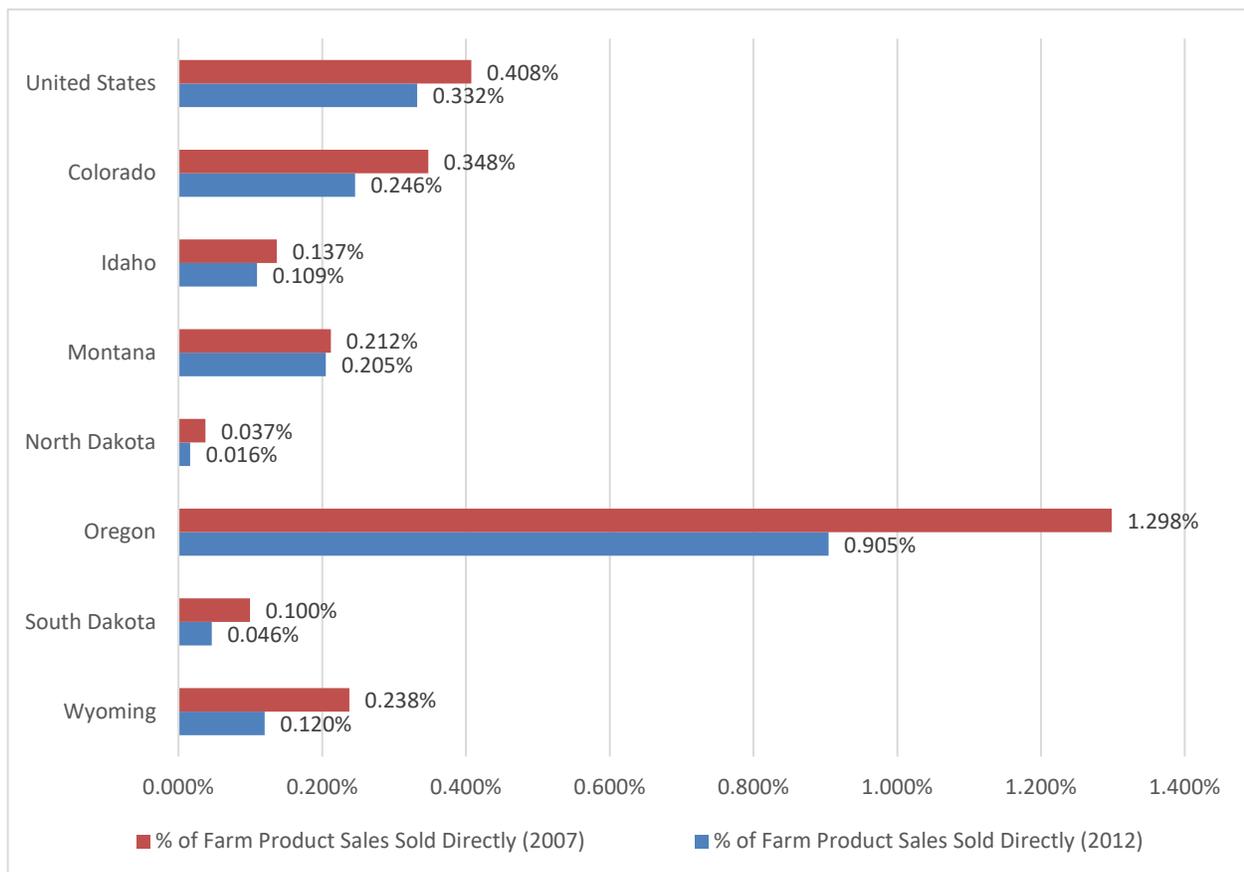


FIGURE 3: DIRECT SALES AS A PERCENTAGE OF TOTAL FARM PRODUCT SALES. (SOURCE: 2007 AND 2012 USDA CENSUSES)

The overall trend implies that direct sales have not kept pace with total farm product sales, whether decreasing more rapidly or increasing more slowly. It also tells us that direct marketing channels need to be expanded in order to increase the proportion of total sales made up by direct sales.

⁷ USDA NASS, 2012 Census of Agriculture, South Dakota Market Value of Agricultural Products Sold Including Direct Sales: 2012 and 2007, https://www.agcensus.usda.gov/Publications/2012/Full_Report/Volume_1,_Chapter_2_County_Level/South_Dakota/st46_2_002_002.pdf.

Food Hubs, Farmers’ Markets, And CSAs

Food hubs, CSAs, and farmers’ markets comprise good indicators of the state of local agriculture, as consumers often come into contact with the local food system via these venues (Tables 4 and 5). The popularity of CSAs in the states within the region varied greatly. Between 2007 and 2012, the number of farms participating in CSAs increased in four states, but decreased in three states. The states in which they increased show a promising trend, given that there was a slight decrease in CSA participation nationally. Farmers markets, on the other

	% Change in Farms Participating in CSAs, 2007-12	% Growth in Farmers Markets, 2009-2013
Colorado	6%	48%
Idaho	12%	74%
Montana	-16%	52%
North Dakota	6%	32%
Oregon	25%	73%
South Dakota	-44%	150%
Wyoming	-10%	41%
United States	-0.5%	56%

hand, unilaterally increased between 2009 and 2013. The magnitude of the increase ranged from 31.9% in North Dakota all the way to

TABLE 4: CHANGE IN CSAs (2007-2012) AND FARMERS MARKETS (2009-2013). (SOURCE: FOOD ENVIRONMENT ATLAS, 2007 AND 2012 USDA CENSUSES)

150% in South Dakota. This suggests that farmers’ markets are increasing in popularity and

What is a Food Hub?
A regional food hub is “a business or organization that actively manages the aggregation, distribution, and marketing of source-identified food products primarily from local and regional producers to strengthen their ability to satisfy wholesale, retail, and institutional demand.”

becoming a primary source by which people interact with local food producers.

Because food hubs developed relatively recently, we do not have historical data to understand broader trends.⁸ On the national level, the USDA reports that food hubs increased 288% between 2006-07 and 2015, showing their growing value in the local food system. From the current data in our region, North Dakota, South Dakota, and Wyoming all lack food hubs, so establishing ones will be extremely valuable in supporting local farmers and the local economy, while

improving access to fresh, healthy food.

⁸ <http://ngfn.org/resources/ngfn-database/knowledge/FoodHubResourceGuide.pdf>

TABLE 5: NUMBER OF FOOD HUBS (2016). (SOURCE: USDA KNOW YOUR FARMER, KNOW YOUR FOOD)

	Number of Food Hubs, 2016
Colorado	5
Idaho	2
Montana	3
North Dakota	0
Oregon	12
South Dakota	0
Wyoming	0

Trend Summary

Looking purely at the numbers, the local food system appears to have mixed success. On one hand, more farms use direct-to-consumer marketing and farmers' markets are increasing in popularity. On the other hand, the value of direct sales is decreasing, and most states in the region are below the national average regarding the proportion of total agricultural sales accounted for by direct sales. This suggests that, while local food may be more popular and in demand, it is becoming less economical for many farmers to market directly to consumer. On the other hand, we see the rise of intermediated marketing as a valuable tool for many farms, highlighting that local food is not necessarily losing momentum but rather changing the way in which it reaches the consumer.

Direct-to-consumer sales tend to have higher survival rates among beginning farmers. USDA found that beginning farmers selling their products through traditional channels had a survival rate of 47.4%, compared to a 54.3% survival rate for beginning farmers who used direct-to-consumer marketing from 2007-2012.⁹ Given that, in the agricultural sector, business survival is relatively low, especially among beginning farmers, it is important to ensure that direct-to-consumer sales continue to be a viable option for producers. At the same time, direct-to-consumer farms exhibited lower rates of growth than other farms, perhaps because of how labor intensive they are. Therefore, there is a need to support direct-marketing farms to help them maintain a level of growth that ensures continued success.¹⁰ In later sections, we will explore ways to expand direct-to-consumer marketing to help smaller farms earn a larger share of the market and improve farm resiliency.

While local food may be more popular and in demand, it is becoming less economical for many farmers to market directly to consumers. Given the importance of direct marketing in farm survival, there is a need to support direct-marketing farms to help them have continued success.

⁹ U.S. Department of Agriculture , Economic Research Service, *Trends in U.S. Local and Regional Food Systems*, 13.

¹⁰ Nigel Key, *Local Foods and Farm Business Survival and Growth*, <http://www.ers.usda.gov/amber-waves/2016-march/local-foods-and-farm-business-survival-and-growth.aspx#.V7MswJgrKhd> (accessed August 15, 2016).

Investment

This section uses USDA’s KYF2 data to study federal investment into local food system projects. Investment figures demonstrate the public commitment toward developing stronger, more sustainable local food systems. Looking at examples of successfully funded projects shows how groups created project proposals that catered to the various needs of their states’ diverse populations, and also provides inspiration for ways in which these ideas can be adapted and transferred to different communities.

State	Federal Grant Funds for Local Food Projects	Grant Money per Capita
<i>Colorado</i>	\$ 14,267,949	\$ 2.66
<i>Idaho</i>	\$ 10,423,115	\$ 6.38
<i>Montana</i>	\$ 5,239,661	\$ 5.12
<i>North Dakota</i>	\$ 6,857,153	\$ 9.27
<i>Oregon</i>	\$ 35,614,725	\$8.97
<i>South Dakota</i>	\$ 4,275,639	\$ 5.01
<i>Wyoming</i>	\$ 3,642,122	\$ 6.23

TABLE 6: FEDERAL GRANT MONEY FOR LOCAL FOOD PROJECTS. (SOURCE: USDA KNOW YOUR FARMER, KNOW YOUR FOOD)

Local food projects based in Montana, North Dakota, South Dakota and Wyoming received under \$10 million per state in federal grant funding between 2009 and 2014 (Table 6). Oregon-based projects received over \$35 million in that same period. This, in part, may reflect the state’s larger population, but Colorado’s population is about 2 million more than Oregon yet it received \$20

million less. This suggests that more Oregon producers, non-profits, and governmental bodies take better advantage of the grant programs offered by USDA and there is widespread commitment towards developing local food.

However, looking at grant money per capita provides a slightly better comparison between states and shows that North Dakota actually receives the most federal grant money per person, followed by Oregon. The *Strolling of the Heifers' Locavore Index* actually places North Dakota second in the nation for funding per capita, meaning that, relative to the state's population, it is doing well in securing grant funding.¹¹ Despite getting a larger amount of money than many other states in the region, Colorado's grant money works out to only \$2.66 per capita. Vermont is first in the nation for KYF2 funding per capita at over \$21. Therefore, even though North Dakota is second in the nation, it, and every other state in WORC's region, can still work on securing more federal funding for local food projects.

The list below, organized by state, highlights some proposals that received federal funding over the past seven years. The wide range of examples reflects the flexibility of many USDA grant programs, where organizations can design a proposal that best suits their needs and goals. Many states and non-profits used these grants to make farmers' markets more accessible or improve farm-to-school programs, whereas producers often applied for grants in order to either boost or expand their local presence.

Colorado

- Developing year-round farmers' markets (Recipient: Be Local Northern Colorado)
- Television campaign to promote buying local foods (Recipient: Colorado Department of Agriculture)
- Increasing awareness among low-income youth through a Youth Farmers' Market model (Recipient: Slow Food Denver)
- Creating farm-to-school curriculum for grades 1-5 (Recipient: Colorado State University)

Idaho

- Expanding Electronic benefit transfer (EBT) access at farmers' markets (which helps people on welfare programs use food benefits to buy fresh, local produce) (Recipients: Idaho Center for Sustainable Agriculture, City of Moscow, Sustainable Community Connections of Idaho, Somali Bantu Zigua Community)
- Promoting the "Idaho Preferred" program to support state-grown foods (Recipient: Idaho State Department of Agriculture)
- Providing equipment for a local co-op (Recipient: Wood River Resource Conservation & Development Council, Inc.)

Montana

- Building a farm-to-hospital program (Recipient: Lake County Community Development Corporation)
- Support for EBT projects (Recipients: Yaak Valley Forest Council, Bigfork Farmers Market Cooperative)

¹¹ *Strolling of the Heifers, 2016 Locavore Index*, <http://www.strollingoftheheifers.com/locavoreindex/> (accessed August 15, 2016).

- Promoting restaurant use of local foods (Recipient: Montana Department of Agriculture)
- Mobile farmers' markets for Native American producers to sell their crops (Recipient: Intertribal Agriculture Council)

North Dakota

- Increasing marketing of North Dakota-grown products sold at farmers' markets (Recipient: North Dakota Farmers' Market and Growers' Association)
- Developing a growers' cooperative (Recipient: Morning Joy Farm)
- Improving food security on the Standing Rock Sioux Reservation (Recipient: North Dakota State University)

Oregon

- Converting a Brownfield site to a community garden (Recipient: City of Portland)
- Supporting emerging immigrant/refugee farmers (Recipient: Zenger Farms)
- Implementing an anti-hunger program for low-income people at a farmers' market (Recipient: Adelante Mujeres)
- Building more EBT access programs (Recipients: Community Action Program of East Central Oregon, Calapooia Food Alliance, The Rogue Initiative for a Vital Economy, Silverton Hospital Inc., Neighborhood Economic Development Corporation)

South Dakota

- Using established school teaching gardens to increase fruit and vegetable consumption among students, staff, and faculty (and the neighborhood) (Recipient: South Dakota Department of Agriculture)
- Designing an online marketplace to connect specialty crop producers within the state (Recipient: Value Added Agriculture Development Center)
- Creating a mobile farmers' market on the Pine Ridge Reservation for Lakota producers to increase direct sales (Recipient: Lakota Fund, Inc.)

Wyoming

- Exploring opportunities to build CSAs in the state (Recipient: Wyoming Department of Agriculture)
- Completing a community food assessment to understand food needs and how to build a more sustainable and economically profitable local food system (Recipient: Boulder Development)
- Expanding farm-to-school activities by increasing the amount and variety of local food available in public schools (Recipient: Wyoming Department of Agriculture)



FIGURE 4: TRANSFORMATION OF THE EMERSON STREET GARDEN IN OREGON, A FORMER BROWNFIELD NOW CONVERTED TO A COMMUNITY GARDEN AND GATHERING AREA AS PART OF A FEDERAL GRANT (SOURCE: [HTTP://WWW.GROUNDWORK PORTLAND.ORG/PROJECTS/](http://www.groundworkportland.org/projects/))

Farm-to-School and Institutional Buy-In

This section examines various institutions that can buy local food (restaurants, colleges, prisons, hospitals, and schools) and what steps (when known) have been taken toward that end. The focus is primarily on farm-to-school programs, as USDA provides a significant amount of data on them.

We collected data from Google searches, state government websites, and watchdog groups on the number of each type of institution in the state to evaluate the potential buying power for local foods (Table 7). Many institutions within a state could support the local food system if they chose to source even 10% of their food from local vendors.

	Restaurants ¹²	Colleges ¹³	School Districts ¹⁴	Hospitals ¹⁵	Prisons ¹⁶
Colorado	4689	58	183	146	96
Idaho	1223	24	114	58	54
Montana	1063	32	310	62	48
North Dakota	555	22	179	66	46
Oregon	3974	58	198	80	49
South Dakota	716	25	150	64	73
Wyoming	553	12	48	38	32

TABLE 7: INSTITUTIONS WITH THE POTENTIAL TO SOURCE FOOD LOCALLY (SOURCE: GOOGLE, STATE GOVERNMENT WEBSITES, USDA FOOD ENVIRONMENT ATLAS)

If every restaurant sourced even a small portion of their raw materials from local producers during the growing season, it would greatly help the local economy and support local farmers. Some restaurants in these states likely already purchase locally-grown food, but the opportunity for expansion of farm-to-table programs remains.

¹² Only full-service restaurants were included in the count, as they often have more flexibility in procurement policy than fast-food chain restaurants.

¹³ Satellite campuses and non-residential colleges are also included, as they have food options on campus. When present in a state, tribal colleges and federal institutions are included in the count. However, colleges such as cosmetology schools, etc. are not included.

¹⁴ This only includes publicly-funded school districts, no private or charter schools.

¹⁵ This data was gathered through the state's Department of Health – it includes hospitals, residential psychiatric hospitals, and chemical dependency treatment centers. Places where food is unlikely to be served (i.e., laser eye surgery centers) were excluded from the count.

¹⁶ Includes county jails and juvenile detention centers, as well as any federal prisons within a state's borders.

The Healthy Food in Health Care Pledge (through Health Care Without Harm), asks for a healthcare industry commitment to improve food sourcing and nutrition practices, including trying to purchase local foods. Several Oregon hospitals and a handful of healthcare facilities in other states signed the pledge. North and South Dakota lack a hospital listed on the pledge. Some food service contractors also signed on, so hospitals in these states may receive healthy, local food. However, these signees form only a small fraction of the hospitals in each state, so there is an opportunity for more growth. The two examples below show how various institutions within states can improve their purchasing policy and better support the local food system.¹⁷

A Model for Large-Scale Action: Kaiser Permanente's Hospitals

Kaiser Permanente, a network of hospitals in California, Colorado, Georgia, Hawai'i, Maryland, Oregon, Virginia, Washington, and Washington D.C., makes sustainable, locally-sourced food a part of its mission. It spends approximately 20% of its overall food budget on sustainably produced food, which has to either be produced within 250 miles of the facility or meet certain other criteria for its production (such as organic certification, humanely raised, no sub-therapeutic antibiotics). During bidding for potential food service vendors, Kaiser utilizes a Sustainable Food Scorecard in order to choose the vendor that meets the most sustainability criteria. About 50% of its fresh produce are considered sustainably-produced. Kaiser Permanente sponsors about 50 farmers' markets at hospitals and medical centers, including four in Colorado and one in Oregon. These markets seek to promote preventative healthcare among the wider community and to extend the push for local, sustainable food beyond the hospital walls.

Institutional Procurement Policy: LA's Good Food Purchasing Program

The Good Food Purchasing Program (GFPP) in Los Angeles provides an important example of how comprehensive procurement policy influences institutional actions. The Los Angeles Food Policy Council developed it in 2012 and the City of Los Angeles and the Los Angeles Unified School District both adopted it. By encouraging the purchase of food that falls into five categories – local, sustainable, fair, humane, and healthy - the GFPP demonstrates that procurement policy can be immensely successful. The school district bought \$10 million worth of local produce in 2013, highlighting the impact of having institutional purchasing programs.

¹⁷ Kaiser Permanente Farmers' Market Directory, https://healthy.kaiserpermanente.org/static/health/en-us/landing_pages/farmersmarkets/in-colorado-southern.htm (accessed July 24, 2016); Kaiser Permanente: Promoting Sustainable Farming and Food Choices Fact Sheet 2015, https://share.kaiserpermanente.org/wp-content/uploads/2014/05/Sustainable-Food_factsheet_2015.pdf (accessed July 24, 2016); Los Angeles Food Policy Council: Good Food Purchasing Policy, <http://goodfoodla.org/policymaking/good-food-procurement/> (accessed July 24, 2016).

Prisons hold significant potential as a market for local foods. In response to the recurring complaints about inedible, inadequate food, purchasing from local suppliers offers the chance to buy fresh, nutritious produce.¹⁸

- In South Dakota, Mike Durfee State Prison grows food on-site and provides some of its produce to the Yankton County Jail.
- Montana Women’s Prisons in Deerlodge and Billings make efforts to source their food locally, partnering with local vendors for produce, meat, and grains.
- The Oregon State Correctional Institution grows some produce onsite and sources 37% of its food from within the state.¹⁹
- The Multnomah County (Oregon) Sheriff’s Office looked into increasing local food procurement for the county jail; currently, its contract with Aramark contains language requiring the food service vendor to procure as much local food as possible, which currently stands at about \$160,000 per year. It is now considering setting a numerical goal for local food procurement (either in terms of costs or percentages) or becoming a partner in a regional food purchasing alliance.²⁰

“I NEVER REALLY ATE MUCH FRESH FOOD GROWING UP. [IN PRISON] YOU CAN’T BUY FRESH VEGETABLES AT THE CANTEEN, SO THE ONLY TIME WE GET THEM IS WHEN THEY SERVE LUNCH AT THE CHOW HALL.”

Steven Tynan, Oregon State Correctional Institution inmate

Farm-to-School Programs

The USDA’s Farm-to-School program encourages schools to procure local food, teach students about food systems, and begin school gardens.

Farm-to-School Participation in the WORC Region

In 2013, USDA conducted a survey on farm-to-school activities within school districts. The data collected from the Farm-to-School census shows variation in terms of which states have a significant number of school districts enacting farm-to-school activities and which lack the same level of participation (Figure 4). The response rate for each state varied, so not every school

¹⁸ “Corporations Served Prisoners Cake Contaminated by Rats, Covered Over Evidence with Icing,” *ThinkProgress.org*, March 17, 2015, <http://thinkprogress.org/economy/2015/03/17/3635010/aramark-michigan-ratatouille-except-less-cute/> (accessed July 20, 2016).

¹⁹ Morgan Bulger, “Six U.S. Correctional Facilities with ‘Farm to Prison’ Local Food Sourcing Programs,” January 4, 2015, <http://seedstock.com/2015/01/04/six-u-s-correctional-facilities-with-farm-to-prison-local-food-sourcing-programs/> (accessed July 20, 2016).

²⁰ *Multnomah County Sheriff’s Office Sustainable Jail Project*, <http://www.mcso.us/profiles/pdf/sustainablejailplan.pdf> (accessed July 20, 2016); Marcus Harris Green, “Forget Nutraloaf – Prisoners are Growing Their Own Food,” *Yesmagazine.org*, March 24, 2016, <http://www.yesmagazine.org/people-power/forget-nutraloaf-prisoners-are-growing-their-own-food-20160324> (accessed July 20, 2016).

district was represented in the survey. Wyoming has the lowest participation in farm-to-school programs, with only 17% of schools responding that they had any ongoing activities and 13% planning to introduce some in the future. At the other end of the spectrum, 84% of Oregon’s schools currently run farm-to-school activities or plan to begin a program in the future.

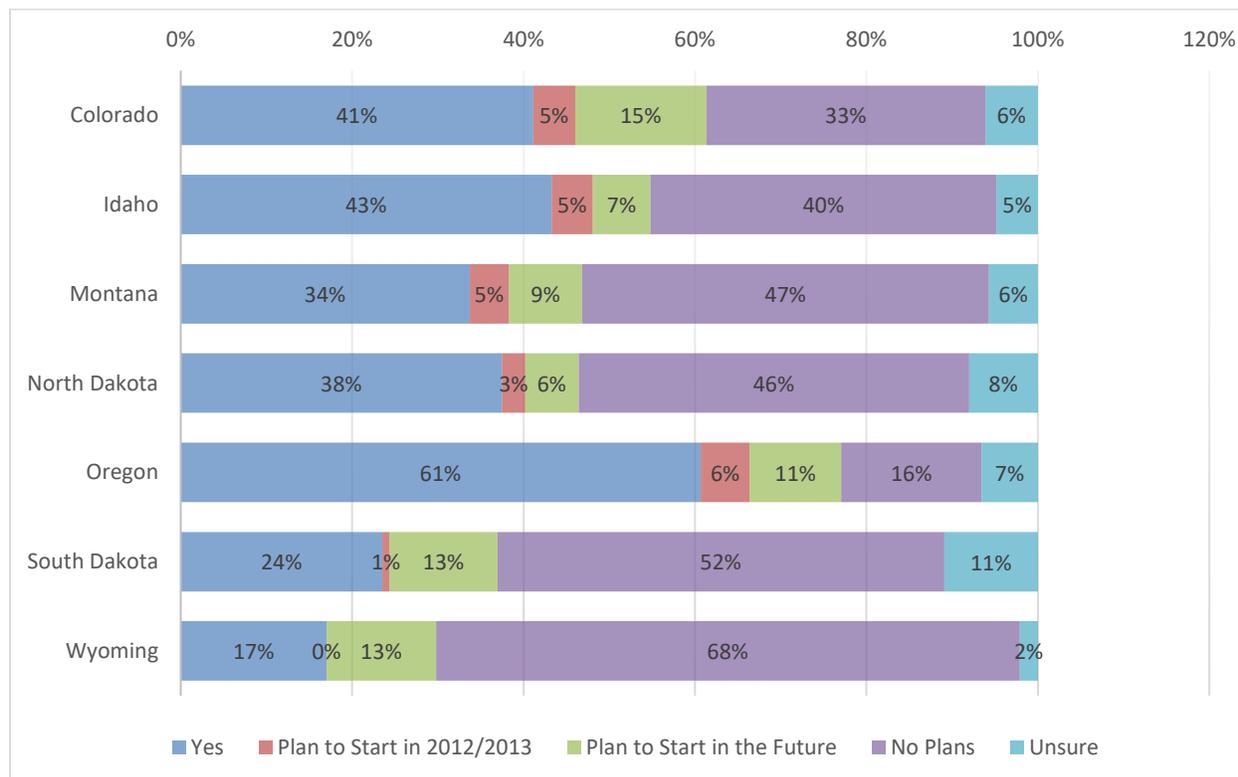


FIGURE 4: FARM-TO-SCHOOL PARTICIPATION AMONG STATES. (SOURCE: 2013 USDA FARM-TO-SCHOOL CENSUS)

In order to observe how farm-to-school activities are geographically distributed, it is valuable to look at a map of the region with school districts (Figure 5). Farm-to-school programs, identified by zip codes, are color coded based on whether they have a farm-to-school program, plan to begin one, or have no program and no plans. Both the non-responses and the yellow areas (no program) identify areas for improvement.²¹

²¹ Some of the blank areas are caused by the fact that school districts can include multiple zip codes, not accounted for in the data set.

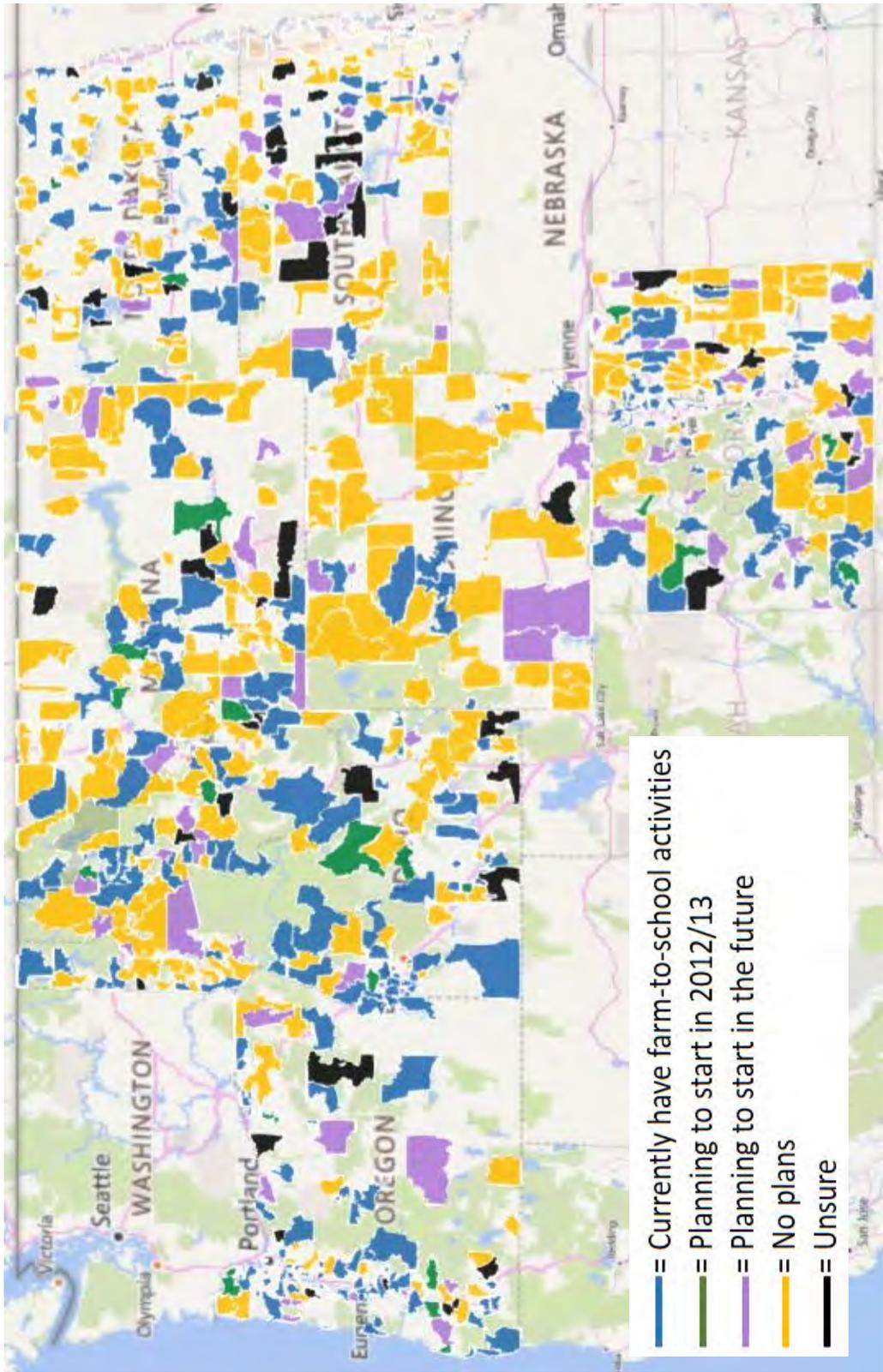


FIGURE 5: MAP OF FARM-TO-SCHOOL ACTIVITIES BY ZIP CODE. (SOURCE: 2013 USDA FARM-TO-SCHOOL CENSUS)

Sourcing Local Food

Sourcing data for schools conducting farm-to-school activities shows a relationship between where schools tend to get their food and the extent of farm-to-school programs. Half of the districts in most states buy some to most of their locally-sourced food directly from individual producers, while some schools utilize distributors to procure local food. Schools in states with more farm-to-school programs are more likely to purchase local food through a distributor. Over half of schools in Colorado, Idaho and Oregon with farm-to-school programs utilize distributors to source local food. Schools in Montana, North Dakota, South Dakota and Wyoming purchase local food primarily from individual producers. This suggests that distributors in certain states may not consider local food important or profitable or there is not enough demand for it to warrant them making it available, forcing schools with farm-to-school activities to work with individual farmers. This process often takes time and effort, which might explain the lower proportion of school districts adopting such programs.



STUDENTS PARTICIPATING IN FARM-TO-SCHOOL ACTIVITIES IN MONTANA (SOURCE: [HTTP://WWW.FARMTOSCHOOL.ORG/OUR-NETWORK/MONTANA](http://www.farmtoschool.org/our-network/montana))

Use of Local Food at Mealtimes

Data shows that most schools use local food for lunch (Table 8). This maximizes the number of students exposed to locally-sourced food. It also shows areas in which schools can grow; South Dakota, for example, has very few schools using local foods in the breakfast program, so this is an area to consider expanding. Many schools in Idaho, Montana, and North Dakota use USDA's Fresh Fruit and Vegetable program, which provides free fruits and vegetables to all students in participating schools separate from meal times. School districts in the other states could utilize this program to support other local food initiatives.

	Breakfast Program	Lunch Program	Supper Program	Snack Program	Fresh Fruit and Vegetable Program	Summer Meal Program
Colorado	64%	100%	3%	18%	20%	29%
Idaho	70%	95%	2%	22%	52%	38%
Montana	54%	96%	5%	21%	47%	18%
N. Dakota	40%	92%	0%	17%	50%	2%
Oregon	63%	98%	28%	19%	36%	32%
S. Dakota	12%	87%	0%	8%	45%	8%
Wyoming	28%	85%	0%	0%	28%	0%

TABLE 8: PROPORTION OF SCHOOLS WITH FARM-TO-SCHOOL PROGRAMS UTILIZING LOCAL FOODS DURING MEALS/PROGRAMS (SOURCE: 2013 USDA FARM-TO-SCHOOL CENSUS)

Challenges of Beginning Farm-to-School Activities

Schools gave a variety of reasons they lack a farm-to-school program, including:

- The challenge of finding year-round availability of important items. This is not easy to address, as the growing season lines up with summer vacation, when students are away.
- Some primary vendors did not offer local items.
- Difficulty in finding new supplies/growers or getting information about product availability. This suggests that more schools might be willing to implement farm-to-school activities if some resource connected them to local food producers/suppliers in their areas and provided information regarding which products would be available and when.
- The potentially higher cost of local foods. This could be addressed through grants or some kind of policy action on the state level, as in Oregon, where schools are reimbursed a small amount per student to offset the expense of buying local.²²

Farm-to-school activities are not limited to buying local food. There are multiple ways in which farm-to-school activities translate to a school setting. In all the states of the region, many of the schools with farm-to-school programs utilized diverse strategies. Some schools hosted community events, allowing the wider community to learn about the local food system and its value. Events like these also expand the impact of farm-to-school programming past the

²² Oregon Department of Education, *Oregon Farm to School Grant*, <http://www.ode.state.or.us/search/page/?id=4199> (accessed August 1, 2016).

students and their families. One-quarter of Montana's schools with farm-to-school programming held such gatherings, but the rest of the states in the region showed slightly lower results.

Some schools integrate farm-to-school concepts into the curriculum. This reinforces the importance of local food to schoolchildren and can make buying local a lifelong habit.



SCHOOL STUDENTS IN KALISPELL, MONTANA SAMPLE LENTIL HUMMUS (SOURCE: [HTTP://MONTANA.BLOG.FOODCORPS.ORG/2015/02/11/FOODCORPS-MONTANA-ON-INSIDE-SCHOOL-FOOD-THIS-WEEK/](http://montana.blog.foodcorps.org/2015/02/11/foodcorps-montana-on-inside-school-food-this-week/))

Colorado and Montana have the highest participation in classroom integration projects, but less than one-quarter of the school districts in each of the states utilize such programs. In general, farm-to-school programming primarily targets students in grades K-5, but programs could be expanded to include middle and high schoolers in order to reinforce good eating habits.

Is Serving Local Food in Schools Actually More Expensive?

Despite schools' concern that buying local is more expensive, average food expenses per student in school districts with farm-to-school programs compared favorably to expenses in areas with no farm-to-school activities in almost every state in the region (Table 9). In fact, states like Colorado had costs associated with buying local that were significantly lower. This means that conducting farm-to-school programs is not necessarily more expensive; it is possible to utilize local food without increasing costs. Similarly, the percentage of overall school expenditures spent on food for districts dedicated to farm-to-school activities were comparable to those without programs. In some states, such as Colorado, Montana, Oregon, and Wyoming, having farm-to-school activities correlated with lower percentages of total spending on food, whereas districts with farm-to-school programs in Idaho, North Dakota, and South Dakota appeared to spend slightly more on food as a percent of their overall expenses.

		Had Farm- to-School Activities in 2011/12	Started activities in 2012/13	No, but plan to start in the future	No activities and no plans to start	I don't know
CO	<i>Avg. % of Total Expenditure Spent on Food</i>	3.10%	2.97%	3.58%	3.34%	4.70%
	<i>Avg. Food Expenses Per Student</i>	\$368.77	\$420.91	\$470.69	\$526.79	\$897.94
ID	<i>Avg. % of Total Expenditure Spent on Food</i>	4.71%	4.62%	4.52%	4.44%	5.26%
	<i>Avg. Food Expenses Per Student</i>	\$430.78	\$384.42	\$531.12	\$501.42	\$505.81
MT	<i>Avg. % of Total Expenditure Spent on Food</i>	4.25%	5.90%	5.13%	4.82%	4.60%
	<i>Avg. Food Expenses Per Student</i>	\$615.44	\$862.42	\$842.17	\$738.25	\$639.55
ND	<i>Avg. % of Total Expenditure Spent on Food</i>	4.13%	3.69%	4.19%	4.10%	3.55%
	<i>Avg. Food Expenses Per Student</i>	\$513.39	\$506.99	\$1,044.00	\$715.97	\$472.98
OR	<i>Avg. % of Total Expenditure Spent on Food</i>	3.48%	4.13%	3.94%	3.54%	3.65%
	<i>Avg. Food Expenses Per Student</i>	\$452.70	\$445.94	\$610.17	\$449.42	\$411.23
SD	<i>Avg. % of Total Expenditure Spent on Food</i>	4.63%	4.49%	4.29%	4.07%	4.68%
	<i>Avg. Food Expenses Per Student</i>	\$469.89	\$522.83	\$463.24	\$470.06	\$528.47
WY	<i>Avg. % of Total Expenditure Spent on Food</i>	2.43%	0%	2.19%	2.58%	2.71%
	<i>Avg. Food Expenses Per Student</i>	\$618.62	\$0	\$437.84	\$593.73	\$814.06

TABLE 9: PERCENT OF TOTAL EXPENDITURES SPENT ON FOOD AND FOOD EXPENSES PER STUDENT BY PARTICIPATION IN FARM-TO-SCHOOL ACTIVITIES (SOURCE: 2013 USDA FARM-TO-SCHOOL CENSUS)

Summary of Institutional Procurement and Farm-to-School

In the WORC region, some states, such as Colorado and Oregon, show strong commitment to farm-to-school programs, while other states have room for improvement. Evidence suggests that farm-to-school activities can be cost-effective, helping to alleviate concerns about expense. Farm-to-school is an ever-expanding program, and federal agencies, many state agencies, and non-profits now provide important support and guidance. Implementing programs at schools can improve nutrition and encourage healthy eating choices, creating long term economic benefits for communities, and, coupled with farm-to-institution programs, are aspects of the local food system that should be expanded to the fullest extent.

Food Insecurity and Local Food

The goal of this section is to understand the relationship between food insecurity and the local food system, using benefit programs as the main measure of food access and security. The prime focus is on farmers’ markets and the ongoing attempts to make them more accessible to all people regardless of level of income. The growing problem of food insecurity is often associated with higher healthcare costs and other problems, so there is a significant social benefit to finding ways to address the issues.²³

Farm-to-School and Insecurity

Farm-to-school programming can be valuable in areas with high food insecurity, as it offers the opportunity for students to get fresh, nutritious food that they might not be able to access elsewhere. The relationship between the presence of farm-to-school programs and the percent of students eligible for free and/or reduced price school meals shows whether farm-to-school programming actually reaches the most vulnerable segment of the student body. Idaho and Oregon, for example, have a high number of schools with food insecure students engaged in Farm-to-School programs (Table 10). There is plenty of room for growth of Farm-to-school programs. The data suggest students who benefit most from

What is “Food Insecurity?”

The USDA separates food insecure populations into two categories – low food security and very low food security. Low food security means that someone has a “reduced quality, variety, or desirability of diet,” but not necessarily a reduced food intake. Very low food security, however, means that someone has “multiple indications of disrupted eating patterns and reduced food intake.”

	Yes, participated in 2011/12	No, but planning to start in 2012/13	No, but plan to start in the future	No activities and no plans	I don't know
CO	43.7%	48.3%	47.7%	49.2%	53.6%
ID	55.1%	52.0%	62.4%	51.1%	58.4%
MT	42.5%	43.4%	42.1%	42.9%	51.7%
ND	38.9%	28.1%	53.3%	36.2%	44.9%
OR	60.0%	61.5%	64.6%	55.9%	62.4%
SD	37.2%	48.0%	46.0%	43.9%	40.7%
WY	48.5%	N/A	38.1%	36.1%	45.0%

TABLE 100: PERCENTAGE OF STUDENTS ELIGIBLE FOR FREE OR REDUCED-PRICE LUNCH AS A FUNCTION OF FARM-TO-SCHOOL PARTICIPATION STATUS OF THE DISTRICT. (SOURCE: 2013 FARM-TO-SCHOOL CENSUS)

²³ U.S. Department of Agriculture, *Definitions of Food Security*, <http://www.ers.usda.gov/topics/food-nutrition-assistance/food-security-in-the-us/definitions-of-food-security.aspx> (accessed July 21, 2016).

farm-to-school activities are not the ones receiving it. Wyoming appears to show the opposite trend, where the schools with farm-to-school activities are in areas with higher levels of food insecurity, but so few schools in Wyoming have such activities that the trend might be more coincidental than indicative.

The Role of Farmers’ Markets in Fighting Food Insecurity

Farmers’ markets are key institutions because they are a primary way by which many people are introduced to local food. They tend to occur on a regular day and time every week for a number of weeks in the year, providing reliability. This reliability makes them important in fighting hunger and food insecurity as they provide a consistent way for people to purchase fresh, local, nutritious food. Many farmers’ markets now accept multiple types of public food assistance. Table 11 shows the trends in Supplemental Nutrition Assistance Program (SNAP)

	% of Pop. On SNAP, 2009	% of Pop. On SNAP, 2014	% of Pop on WIC, 2009	% of Pop on WIC, 2014	% Food Insecure, 2007-2009	% Food Insecure, 2010-2012
Colorado	6.35	9.43	2.15	1.72	12.2	14.1
Idaho	8.81	12.96	2.99	2.53	11.6	14.3
Montana	9.48	12.2	2.12	1.88	12.4	14.1
N. Dakota	8.20	7.27	2.25	1.73	6.7	8.7
Oregon	15.19	20.21	2.96	2.6	13.9	13.6
S. Dakota	9.11	11.83	2.83	2.29	11.2	12.9
Wyoming	4.92	6.14	2.45	1.99	9.8	13.8

TABLE 11: CHANGES IN FARMERS’ MARKETS AND MARKERS OF FOOD INSECURITY (SOURCE: 2014 USDA FOOD ENVIRONMENT ATLAS)

benefits, Special Supplemental Nutrition Program for Women, Infants, and Children (WIC) benefits, and food insecurity over a four- to five-year period. There has been a fairly large increase in the percent of the population which receives SNAP benefits in every state with the exception of North Dakota. Food insecurity has also risen across the region, with the exception of Oregon, which saw a slight drop despite the 5% increase in SNAP recipients in the state. The increasing problem of hunger in the region corresponds to a simultaneous increase in the number of farmers’ markets (Table 12). The Electronic Benefit Transfer (EBT) system allows

SNAP recipients to use their benefits at authorized farmers’ markets. Farmers markets that accept SNAP benefits, in or near underserved communities, have the potential to increase food access.

	# of Farmers’ Markets, 2009	# of Farmers Markets, 2013
Colorado	106	157
Idaho	39	68
Montana	44	67
North Dakota	47	62
Oregon	100	173
South Dakota	16	40
Wyoming	29	41

Farmers’ market organizers can apply to USDA for authority as to accept SNAP benefits from customers. From 2008 to 2015, the number of SNAP-Authorized farmers’ markets in every state dramatically increased (Figure 6).²⁴

TABLE 122: CHANGE IN THE NUMBER OF FARMERS MARKETS, 2009-2013. (SOURCE: USDA FOOD ENVIRONMENT ATLAS)

Many states jumped from having no SNAP-authorized farmers’ markets in 2008 to having several. In South Dakota, slightly more than half of the farmers’ markets are now EBT-accessible, and Oregon is approaching complete coverage. The Farmers’ Market Coalition, a non-profit that supports farmers’ markets throughout America, has partnered with USDA’s Food and Nutrition Service to cover the cost of buying or renting EBT equipment for three years, allowing more farmers’ markets to become SNAP-accessible. The Oregon Farmers’ Market Association runs an extensive advertising campaign through its website and offers significant support to farmers or market managers trying to acquire this equipment, which further encourages more markets to become SNAP-authorized. This support system may help to explain the very high rate of participation among Oregon markets.

²⁴ Oregon has been excluded from the graph because its dramatic success skewed the graph and made it difficult to visualize the data for the rest of the states. Between 2008 and 2015, the number of SNAP-Authorized farmers’ markets in Oregon increased from 27 to 176.

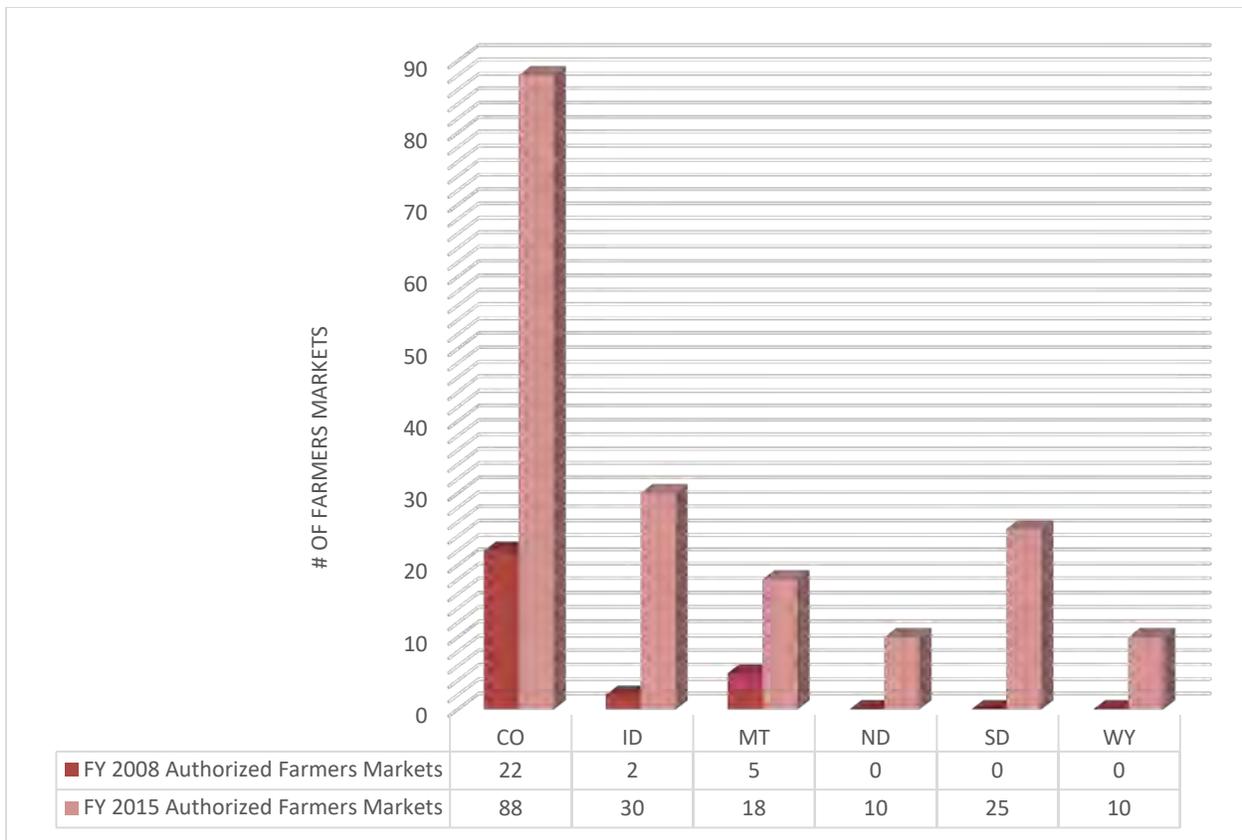


FIGURE 6: CHANGE IN THE NUMBER OF SNAP-AUTHORIZED FARMERS MARKETS, 2008-2015 (SOURCE: USDA FNS)

Looking at the amount of redemptions, in dollars, tells us if food insecure people actually shop at the markets (Figure 7).²⁵ Despite introducing SNAP-accessible farmers’ markets later than the other states, North Dakota, South Dakota, and Wyoming all showed fair redemption levels for 2015.²⁶ Although Wyoming had the fewest number of SNAP-authorized farmers’ markets of any state in the region, redemptions were higher than North Dakota. This reinforces the idea that simply having the market be SNAP-authorized is not adequate to attract more consumers. The number of SNAP-authorized farmers’ markets in Colorado quadrupled, and the subsequent increase in redemptions reflects that change. Double Up Food Bucks programs, which are SNAP-Based Incentive Programs (SBIPs), operate in Colorado, Idaho, and Oregon, and also contribute to the increases in redemptions (a number of community markets in Wyoming also offer incentive programs). SBIPs work by offering SNAP recipients the chance to double what they spend at farmers’ markets (capped at a predetermined amount). This gives SNAP recipients the opportunity to shop regularly at farmers’ markets and buy healthier, fresh foods.

²⁵ Again, Oregon was excluded because it skewed the data visualization too much. In Oregon, the redemptions increased from \$95,529 to \$918,906 between 2008 and 2015.

²⁶ Idaho’s 2008 redemption was not 0, but rather was omitted as a result of USDA’s policy on anonymity (since only 2 farmers’ markets were SNAP-Authorized in 2008).

Missoula, MT also implemented a similar program, but the program has not extended beyond the city. Farmers’ markets in Montana (other than in Missoula), North Dakota, South Dakota, and Wyoming have not implemented programs that double benefits and therefore encourage greater SNAP redemptions at local food venues.

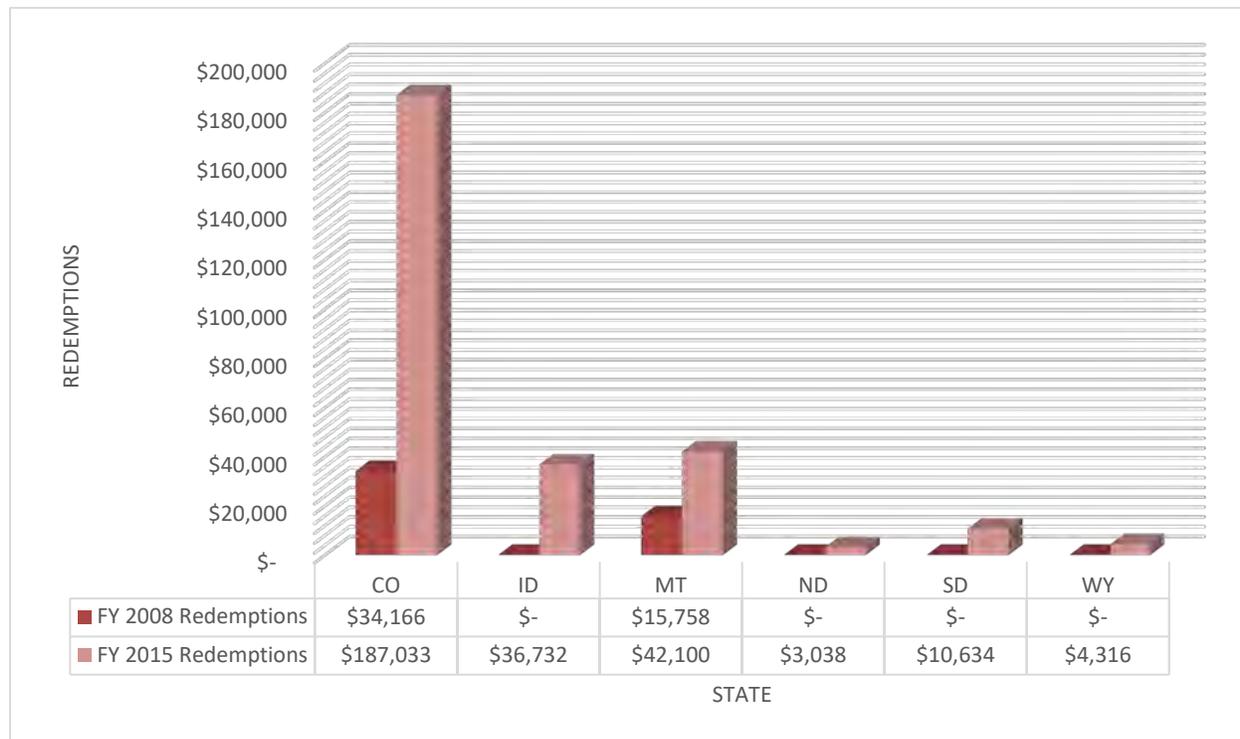


FIGURE 7: CHANGE IN SNAP REDEMPTIONS AT FARMERS' MARKETS, 2008-2015 (SOURCE: USDA FNS)

SNAP recipients’ spending at farmers’ market holds the potential for significant economic impact. Table 12 attempts to quantify the potential amount of money that could be put into the local food system if farmers’ markets became the primary source of meats and produce for SNAP recipients during the growing season. The market season was assumed to be three-and-a-half months long, as many markets run from around June to mid-September or July to mid-October. Based on data from the Bureau of Labor Statistics, approximately 40% of a person’s food expenditure goes toward meat, eggs, poultry, and produce.²⁷ We assume consumers could procure those products from farmers’ markets. Even in Wyoming, which receives the lowest amount of SNAP benefits per month, over \$5 million could potentially be spent at farmers’ markets. Yet, SNAP redemptions at farmers’ markets in the state currently only amount to \$4,316. No state has converted even 1% of the potential spending power into actual

²⁷ Bureau of Labor Statistics, *Consumer Expenditures in 2013*, <http://www.bls.gov/cex/csxann13.pdf> (accessed August 2, 2016).

redemptions at farmers’ markets (Oregon is the highest at 0.676%, North Dakota is the lowest at 0.033%).

The last column in Table 13 calculates the potential economic impact of a SNAP Benefit Incentive Program doubling the amount of SNAP benefits redeemed at a farmers’ market, up to \$10 per month. The calculations assume that the recipient attended four farmers’ markets per

If every farmers’ market offered a \$10 SNAP-Based Incentive Program to SNAP recipients shopping there, the regional investment in local food systems would total over \$400 million.

month (as most farmers’ markets are weekly), that they would spend the full \$10 each month to be able to maximize the offer, and that the market season was three and a half months long. If every SNAP recipient spent \$10 a week on groceries at a farmers’ market and every farmers’ market offered an incentive program that would double their spending money, the resulting investment in the local food system would be millions of dollars. The

potential investment ranges from \$9 million in Wyoming to \$218 million in Oregon. Even if only half of SNAP recipients utilized this system, the impact still would be significant. Therefore, SBIPs, when paired with a solid marketing scheme, clearly have the potential to boost the local food economy and support local producers.

<i>SNAP Based Incentive Programs</i>				
	<i>Monthly SNAP benefits within the state</i>	<i>Benefits for Market Season</i>	<i>40% Potential Available for Market Spending</i>	<i>Economic Impact of SBIPs (\$10/Week)</i>
CO	\$64,327,809	\$225,147,332	\$90,982,037	\$138,637,520
ID	\$22,813,527	\$79,847,345	\$32,266,312	\$55,124,160
MT	\$14,285,076	\$49,997,768	\$20,204,098	\$33,342,960
ND	\$6,492,559	\$22,723,958	\$9,182,751	\$14,881,440
OR	\$96,080,671	\$336,282,351	\$135,891,698	\$218,329,720
SD	\$12,405,851	\$43,420,480	\$17,546,216	\$27,594,840
WY	\$3,870,658	\$13,547,303	\$5,474,465	\$9,129,680

TABLE 133: POTENTIAL SPENDING POWER OF SNAP RECIPIENTS AND POTENTIAL ECONOMIC IMPACT OF \$10 SBIP (SOURCE: BLS, USDA FNS)

The Summer EBT Program for Children is a new program for which limited data exists, but it is worth bringing into the discussion of how local food systems can address food insecurity. For families with school-age children who qualify for reduced price or free meals, this provides extra food benefits during the summer months, when the students generally do not receive food through the school district. The pilot study included regions across eight states (including parts of Oregon) and two reservations. The USDA found that, during the summer, the benefits reduced very low food security among children by one-third. As a result of this success, President Obama included the expansion of the program in his FY17 budget request to Congress.²⁸ Any farmers' market that already uses an EBT system would be able to accept the Summer EBT program funds as well, meaning that the project needs no new training or equipment. The rolling-out process would take place over several years (between 2017 and 2026). The program would generate more funds that could be spent on local products, and also opens up the field to innovative policy ideas to bring school-aged children to the farmers' market and introduce them to the local food system at a young age.²⁹ Other food benefit programs include:

- The Farmers Market Nutrition Program (FMNP) operates through WIC and is a once-yearly check used only at farmers' markets.
- The Senior Farmers' Market Nutrition Program (SFMNP) is similar, except it targets food-insecure seniors rather than mothers and children.
- Cash Value Vouchers (CVV) also come through WIC and are monthly checks only for fruits and vegetables. States must authorize their use at farmers' markets and can apply for funding to help markets begin accepting them. Colorado, Idaho, and Montana have authorized farmers' markets to accept CVV.

²⁸ U.S. Department of Agriculture, *FY17 Summer EBT Proposal Fact Sheet*, <http://www.fns.usda.gov/sites/default/files/ops/FY17SEBTCBudgetFactSheet.pdf> (accessed July 27, 2016).

²⁹ Some specific policy/project recommendations are included in the Policy Recommendations section.

Most states have authorized the FMNP and SFMNP (although some have chosen to authorize only one or the other), but, of the seven states that have not authorized them, five are in this region (Colorado, Idaho, North Dakota, South Dakota, and Wyoming). Some tribal governments have decided to take matters into their own hands, as in the case of the Standing Rock Sioux in North Dakota, who have authorized SFMNP. Tribal governments in some states (Ute Mountain in Colorado, Shoshone in Wyoming, and Cheyenne River in South Dakota) authorized use of CVV at farmers’ markets on their territories. Both of these programs are important in giving more people access to fresh, healthy food, boosting the local economy, and putting money into the local food system. The map and accompanying table show how far behind the region lags in implementing these three programs (Figure 8).

Statewide farmers’ market associations support the implementation and success of these programs. They expand access to local food through the provision of equipment, offer training, help to authorize new markets to become benefits-accessible, and serve as a clearinghouse of information. Montana and South Dakota both lack statewide associations to help coordinate; developing such associations in each state could prove beneficial in growing the local food sector through farmers’ markets.

	FMNP	SFMNP	CVV
Colorado	No	No	Yes (and Ute Mountain Ute Tribe)
Idaho	No	No	No
Montana	Yes	Yes	Yes
N. Dakota	No	Standing Rock Sioux	No
Oregon	Yes	Yes	Yes
S. Dakota	No	No	Cheyenne River Sioux
Wyoming	No	No	Eastern Shoshone

TABLE 12: STATE PARTICIPATION IN SENIOR FARMERS’ MARKET NUTRITION PROGRAM, FARMERS’ MARKET NUTRITION PROGRAM, AND WIC CASH VALUE VOUCHERS AT FARMERS’ MARKETS
 (SOURCE: [HTTP://WWW.FNS.USDA.GOV/SITES/DEFAULT/FILES/WIC/S-FMNP-CVV_MAP.PDF](http://www.fns.usda.gov/sites/default/files/wic/s-fmnp-cvv_map.pdf))

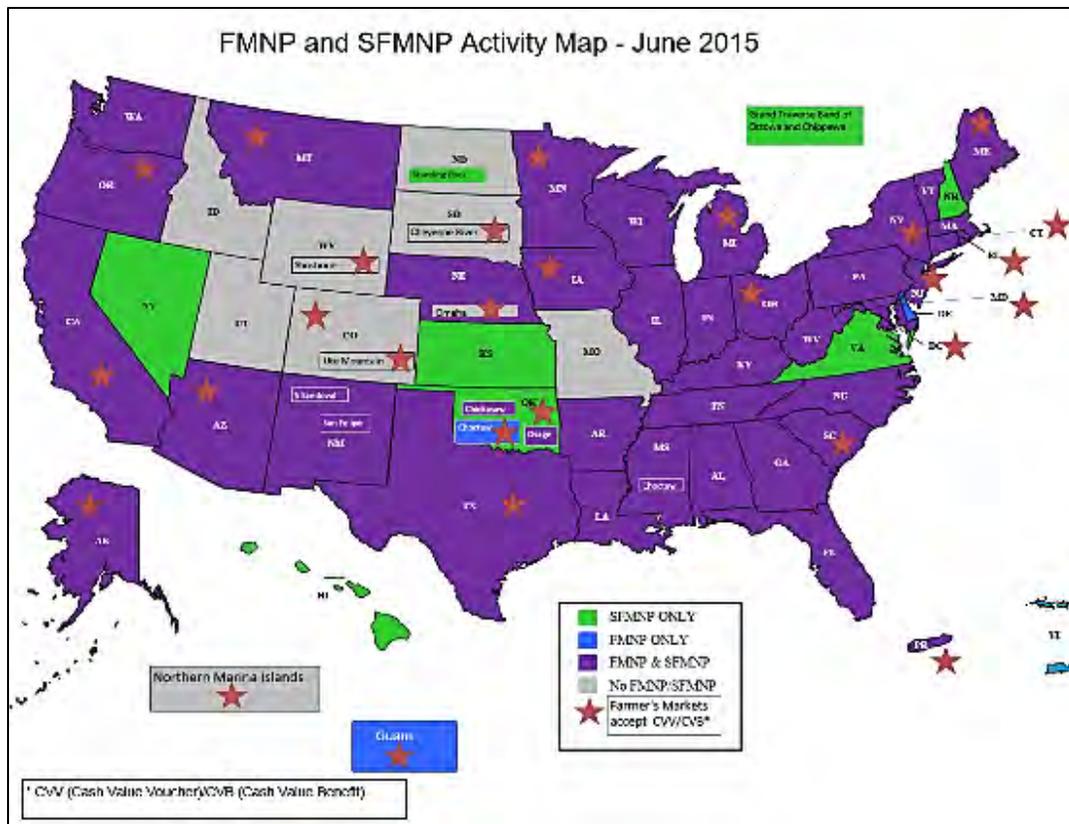


FIGURE 6: (WITH ACCOMPANYING TABLE) STATE PARTICIPATION IN SENIOR FARMERS' MARKET NUTRITION PROGRAM, FARMERS' MARKET NUTRITION PROGRAM, AND WIC CASH VALUE VOUCHERS AT FARMERS' MARKETS (SOURCE: [HTTP://WWW.FNS.USDA.GOV/SITES/DEFAULT/FILES/WIC/S-FMNP-CVV_MAP.PDF](http://www.fns.usda.gov/sites/default/files/wic/s-fmnp-cvv_map.pdf))

Policy Recommendations

There are many ways to improve, widen, and support the local food system within a state or region. Policies boosting consumer awareness and demand for local food promotes the growth of the sector and makes it more profitable for producers. Developing strong producers without ensuring an expanding market for their products may result in the oversaturation of the market, drop in profits, and a downturn in the local food system. The following proposals are ideas for policies or projects that build stronger local food systems.

- I. Farmers' Markets and Access
 - a. Create better incentives for farmers' markets to become Electronic Benefit Transfer-accessible so 100% of farmers' markets can accept SNAP benefits. This could include providing free training and ensuring that every market is aware of USDA's free EBT equipment program.

- b. Improve marketing of farmers' markets that are already SNAP accessible so that SNAP recipients are aware that they can use their benefits there. This could be done through advertising and outreach efforts, as well as ensuring that all new SNAP recipients receive information about EBT-accessible markets when signing up.
 - c. Implement SNAP-Based Incentive Programs in states that currently lack such programs in order to attract more SNAP recipients to farmers' markets and increase the investment in local food systems.
 - d. In states that do not already do so, allow Cash Value Vouchers to be used at farmers' markets. Although it can be slightly expensive to start because of the training required, it will expand access and bring more money into the local food economy.
 - e. Create farmers' market associations in Montana and South Dakota that will bear some of the burden of establishing these programs and developing marketing strategies.
 - f. With the implementation of the Summer EBT program, begin programs at farmers' markets to draw in school-children (such as activity days, cooking classes, and similar programs).
- II. Farm-to-School
- a. Create statewide policy promoting farm-to-school programming, which could include creating a grant program to offset costs or establishing a task force that would support new or expanding farm-to-school programs by helping to locate funding, offering training programs, and providing advice or assistance as needed (see Oregon HB 2800 (2011) and Colorado SB081 (2010)).
 - b. Create curriculum guides to incorporate farm-to-school concepts into the classroom for different grades and subjects.³⁰
 - c. Build a database that connects schools or people in charge of procurement for an institution to producers in the area.³¹
- III. Procurement Policies and Institutional Actions
- a. Improve governmental procurement policy by either requiring a certain amount of food to come from within the state, or mandating that preference be given to state-produced food as long as the price is comparable to what would otherwise be purchased.

³⁰ Oregon's Harvest for Schools is another program worth looking to for inspiration. The program does not create curriculum guides per se, but it does produce educational posters for each fruit or vegetable that is being featured for the month in order to teach students more about healthy choices.

³¹ Montana has a database along these lines (by the Farm to Cafeteria Network, created as part of the Montana Healthy Food and Communities Initiative) where you can search out either producers willing to sell to institutions or institutions looking to buy locally produced foods. <http://farmtocafeteria.ncat.org/>

- b. Create Local Food Policy Councils at the city, county, and/or state levels to help create wholesale, lasting change and to be able to customize local food policy to the needs of the region.

Conclusion

While no single data set provides a baseline for local food production and consumption, it is possible to conduct a type of ecosystem analysis by studying the various components of the local food system and the data available for each aspect. By looking at the producers, institutional demand, funding, local food programs, and access, it is possible to understand the overall state of local food. Clearly, some states lead in local food development, whereas others still have a distance to go. Oregon and Colorado lead in almost every category, whereas the Dakotas and Wyoming tend to lag slightly behind. One of the biggest barriers in many states is a lack of governmental action. Both Colorado and Oregon benefited from the passage of multiple bills emphasizing farm-to-school and other programs that encourage the local food sector, whereas other states have not been lucky enough to have political support behind their efforts. However, there is evidence that progress can be made even without political change, as in South Dakota, where a food hub is being established.

Many troubling trends in the data suggest that local food production and consumption may have reached its peak, but the data can also be viewed as demonstrating the need for new markets. In order to keep local food profitable, new consumers need to enter the market. This is not a problem, but rather an opportunity, based on the data about farm-to-school and food insecurity. Schools provide one new market, as more and more schools try to source their food locally, and many school districts in this region are yet to develop farm-to-school programs, so this is still a relatively untapped resource in some states. In addition, the increases in SNAP redemptions at farmers' markets are significant, yet still represent less than 1% of SNAP benefits that could potentially be spent at markets. Therefore, SNAP recipients represent another group of consumers who could help support and grow the local food system. By increasing the number of consumers and markets available to local producers, we can build a strong, resilient local food system.

Resources on Local Food Systems

While there are few research articles that deal specifically with local food in this region of the country, there are many studies and reports that have been done on a national level which help to shed light on some of the topics covered in this report. In addition, some articles on other parts of the country highlight interesting trends or projects which may prove applicable and inspirational for efforts to improve the local food systems in the West.

- I. Union of Concerned Scientists, *Market Forces: Creating Jobs Through Public Investment in Local and Regional Food Systems*
 - a. http://www.ucsusa.org/sites/default/files/legacy/assets/documents/food_and_agriculture/market-forces-report.pdf
- II. S. Martinez, M. Hand, M. Da Pra, et al. (USDA), *Local Food Systems: Concepts, Impacts, and Issues*
 - a. http://www.ers.usda.gov/media/122868/err97_1.pdf
- III. S. Low, A. Adalja, E. Beaulieu, et al. (USDA), *Trends in U.S. Local and Regional Food Systems (Report to Congress)*
 - a. <http://www.ers.usda.gov/media/1763057/ap068.pdf>
- IV. D. Thilmany and P. Watson, *The Increasing Role of Direct Marketing and Farmers Markets for Western US Producers*
 - a. <http://ageconsearch.umn.edu/bitstream/27982/1/03020019.pdf>
- V. S. Briggs, A. Fisher, et al, *Real Food Choice: Connecting SNAP Recipients with Farmers Markets*
 - a. http://cclhdn.org/wp-content/uploads/2013/02/RealFoodRealChoice_SNAP_FarmersMarkets.pdf
- VI. USDA FNS, *Farmers Market Incentive Provider Study*
 - a. <http://www.fns.usda.gov/sites/default/files/FarmersMarketIncentiveProvider.pdf>
- VII. A. Perline, et. al, *Perceptions of Local Hospitals and Food Producers on Opportunities and Barriers to Implementing Farm-to-Hospital Programs*
 - a. http://www.cas.umt.edu/mdb/FILES_Faculty/2474/JAFSCD-Perceptions-Local-Hospitals-December-2015.pdf
- VIII. A. Azumad and A. Fisher, *Healthy Farms, Healthy Kids: Evaluating the Barriers and Opportunities for Farm-to-School Programs*
 - a. https://www.researchgate.net/profile/Robert_Gottlieb2/publication/254633578_Healthy_Farms_Healthy_Kids_Evaluating_the_Barriers_and_Opportunities_for_Farm-to-School_Programs/links/55a6bfe508ae410caa74f517.pdf