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Marketing Practices and Financial Performance of Local Food Producers: A Comparison of Beginning and Experienced Farmers

Steve W. Martinez and Timothy Park

Abstract

Local foods are a small but growing share of U.S. agriculture. Marketing channels for local foods include direct sales to consumers (e.g., farmers' markets, on-farm stores, or pick-your-own stores), grocery stores, restaurants, schools, wholesalers, and food hubs. Local food sales may provide financial benefits to beginning and more experienced farmers compared to farmers who market through traditional channels. This report evaluates the characteristics, production, and marketing practices, and financial performance of local food producers with varying levels of farming and direct marketing experience.

Keywords: Local foods, 2015 Local Food Marketing Practices Survey, beginning farmers, financial performance, marketing expenses, internet, food hubs, processors, wholesalers, producers, farmers' markets, retail, e-commerce, farm management, third-party certification, Farm Bill, National Agricultural Statistics Service, direct-to-consumer sales, food system, marketing plan, retail, institutions, commodities, fruit, vegetables, crops, eggs, livestock

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What Is the Issue?

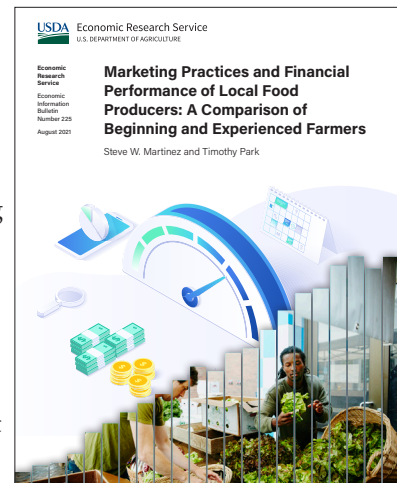
Local foods represent a small (less than 4 percent of total farm sales) but growing share of the U.S. food system—one reflection of consumers' increasing influence on food production. Local foods include products sold directly to consumers, retailers, institutions (e.g., schools and hospitals), and intermediaries (e.g., food hubs, processors, and wholesalers).

We used data from the first local food survey conducted by the U.S. Department of Agriculture (USDA) to evaluate how local food farmers (less than 9 percent of all farms) of varying levels of experience responded to the increasing demand for local food. The survey was used to compare how experience in direct marketing and experience in farming affect producer choices. The study defined 3 levels for farming and marketing experience: first-year producers (no more than 1 year experience); inexperienced producers (2 to 10 years of farming experience or 2 to 5 years of direct marketing experience); and experienced producers (more than 10 years of farming experience or more than 5 years of direct marketing experience). The report focuses on production and marketing practices, including internet use, use of farm management records, and participation in government programs, along with various financial indicators.

What Did the Study Find?

Local foods—or products produced and sold directly to consumers, retail markets, institutions, or intermediate markets for human consumption—are an important sales component of local food producers, accounting for 76 percent of their gross value of agricultural product sales. Local food producers with more farming and direct marketing experience showed higher shares of local food sales. Comparisons of the production and marketing practices of local food producers across different levels of farming experience showed the following:

- More experienced farmers were less likely to have internet access. For instance, 89 percent of first-year farmers had internet access compared to 82 percent of inexperienced farmers and 70 percent of experienced farmers.



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- The percentage of farmers using the internet to purchase farm inputs such as commodities, equipment, and other farm materials and to access non-USDA price/market information fell as farming experience increased. The most popular reason for internet use across all levels of farming experience was to purchase farm inputs.
- A larger share of inexperienced farmers kept farm management records compared to first-year and experienced farmers. Balance sheets and income statements were the most popular types of records among all experience levels compared to cashflow analyses, written business plans, and separate marketing plans. The smallest share of local food producers maintained a separate marketing plan across all levels of farming experience compared to other farm management records.
- Among all local food operations, less than 6 percent participated in any of the five USDA programs included in the survey: the Noninsured Crop Disaster Assistance Program, Farm Loan Programs, Whole-Farm Revenue Protection Program, Environmental Quality Incentives Program (EQIP), and the Value-Added Producer Grant Program. Through the EQIP, which had the second-highest participation rate at 5 percent, USDA helps eligible farmers adopt conservation practices, and beginning farmers are eligible for an increased cost-share rate. Eight percent of inexperienced farmers participated in the EQIP, whereas 4 percent of experienced farmers participated in the program.
- A smaller percentage of farmers with more experience earned positive net sales (i.e., gross value of sales, including Government payments, minus farm expenses paid). Eighty-three percent of first-year farmers earned positive net sales, followed by 73 percent of inexperienced farmers and 70 percent of experienced farmers. Positive net farm sales were associated with internet use to purchase farm inputs and access price and market information.

Comparisons of production and marketing practices across levels of direct marketing experience show:

- First-year and inexperienced direct marketers had a higher percentage of producers with internet access (74 percent and 78 percent, respectively) compared to experienced direct marketers (70 percent). Local food producers with more direct marketing experience were also less likely to use the internet to access resources.
- Balance sheets and income statements were by far the most popular type of farm management records among all levels of direct marketers. Local food producers who maintained a marketing plan separate from other farm management records make up the smallest share across all experience levels.
- Producers with more direct marketing experience had a higher percentage of earning positive net farm sales. Seventy-three percent of experienced direct marketers had positive net farm sales, followed by 65 percent of inexperienced and 57 percent of first-year direct marketers.

How Was the Study Conducted?

The study used data from the 2015 Local Food Marketing Practices Survey (LFMPS) conducted by the USDA, National Agricultural Statistics Service (NASS). The survey provided data on sales, expenses, and marketing practices for agricultural products produced for human consumption and sold directly to consumers, retail markets, institutions, and intermediate markets. The survey was administered in all 50 States. It relied on confidential farm-level survey records to examine how farming and direct marketing experience correlate with the adoption of production and marketing practices and producers' financial performance. The report also compared demographics, farm size and location, and products produced to farms included in the NASS 2012 Census of Agriculture.

Marketing Practices and Financial Performance of Local Food Producers: A Comparison of Beginning and Experienced Farmers

Introduction

A 2018 survey by *The Packer* found 55 percent of consumers made a conscious effort to buy locally grown food, and 48 percent purchased more local produce as compared to 2013 (Kresin, 2019). Consumers' motivations for purchasing local foods included supporting small farms; supporting the local economy; interest in freshness, taste, health, food safety; and concern for the environment (Grebitus et al., 2013). Consumers may also value relationships with producers and information about the origin of their food (Jablonski et al., 2019). While no specific definition of "local" exists, generally, local foods are produced and consumed within "close" proximity (Martinez, 2016). Grebitus et al. (2013) found that consumers' willingness to pay for food decreases as the distance food travels increases. Local food is considered a top consumer trend by supermarkets (Dimitri and Effland, 2018).

The U.S. Department of Agriculture (USDA) supports local food systems as consumer demand has grown (Martinez, 2016; Dimitri and Effland, 2018). Provisions supporting local food systems are regularly included in the Farm Bill. Additionally, the range of programs and funding for local food systems increased steadily (Dimitri and Effland, 2018). Local foods link to many USDA priorities, including supporting small- and medium-sized farms, supporting beginning and socially disadvantaged farmers, enhancing the rural economy, and accessing nutritious foods. Previous research shows that encouraging households to patronize local food outlets more often could increase U.S. consumers' fruit and vegetable expenditures and provide additional revenue to small farmers, helping their business to survive (Stewart and Dong, 2018). Beginning farmers, or those who have operated a farm for 10 or fewer years, generally have lower rates of business survival than more experienced farmers. However, previous studies showed a higher share of beginning farmers sell directly to consumers, and those beginning farmers are more likely to remain in business (Low et al., 2015; Key, 2016). By spending more time marketing, beginning farmers may achieve a certain level of sales with less machinery and land. Farms with direct sales have lower debt levels than similarly sized farms with no direct sales, and direct sales farms may also have a more secure income stream (Key, 2016).

Local and regional food systems became mainstream in the first 5 years of the 21st century as large retailers responded to consumer demand by selling local foods (Dimitri and Effland, 2018). In addition to direct-to-consumer sales (DTC) (e.g., farmers' markets, farm stores, Community Supported Agriculture), direct sales to retailers (e.g., retail stores and restaurants), institutions (e.g., schools and hospitals), and intermediaries (e.g., food hubs, wholesalers, and processors) are increasingly important and surpassed that of DTC sales (Vogel and Low, 2015; Woods et al., 2018; and Plakias et al., 2019).¹ The food industry embraces providing information about products to differentiate from their competition (Costanigro et al., 2014). Marketing efforts shifted from the promotion of food products to the promotion of food attributes, including information about where food comes from.

¹With Community Supported Agriculture, local residents purchase shares in a farmer's expected harvest before planting, then receive weekly deliveries or pick up from the farm throughout the growing season.

Considering consumers' growing interest in local foods and Government support of local food production, this report compared the marketing practices and financial performance of beginning and experienced local food producers.² We used USDA's first-ever 2015 Local Food Marketing Practices Survey (LFMPS) to provide insights about producers that grow and sell foods locally for human consumption. The study built upon previous research using USDA's Agricultural Resource Management Survey (ARMS) from 2008–11 and USDA Census of Agriculture data (2007–12) (Low and Vogel, 2011; Low et al., 2015).³ Understanding barriers to farm entry and survival is important to ensure the next generation of farmers and a secure food supply. As the average age of farmers increases, understanding the characteristics and conduct of young, beginning, and new farmers are particularly important to design Government assistance programs and policies. Young farmers, who are more likely to have higher levels of education, may use direct marketing to transition into agriculture as they learn about production techniques and market opportunities. Farmers with higher education levels are expected to improve local marketing efforts due to the complexity of understanding dynamic market conditions (Ahearn et al., 2018). This report provides guidance for future programs and policies to support local foods and beginning farmers.

²Government programs that support local foods include the Local Agriculture Market Program (LAMP), Farm to School Grant Program, and Specialty Crop Block Grant Program (SCBGP). The LAMP was formed from two existing local food programs and provides funds for qualifying farmers and local food suppliers to link producers with entities that market value-added agricultural products. The Farm to School Grant Program awards competitive grants to eligible entities to implement farm to school programs that improve access to local foods in eligible schools. The SCBGP provides grants to States to enhance the competitiveness of specialty crops—fruits, vegetables, and floriculture—and supports local food projects such as farm to school programs and food safety training.

³The annual ARMS is jointly administered by USDA, National Agricultural Statistics Service (NASS) and USDA, Economic Research Service (ERS) to supplement historical census data with more recent annual developments. It is USDA's primary source of information on the production practices, resource use, and economic well-being of U.S. farms.

The 2015 Local Food Marketing Practices Survey

As directed under the 2014 Farm Act (Title X), USDA, National Agricultural Statistics Service (NASS) conducted a first-time survey to produce official benchmark data on the local food sectors in all 50 States. The 2015 LFMPS was conducted as a special study of the 2012 Census of Agriculture. The survey was administered via mail, phone, web, and in-person to 44,272 farms that might have sold food through local food marketing channels.

NASS mailed survey forms in early April 2016 to assess the marketing practices local food producers used in 2015. Producers were also contacted by phone or in-person from June through August 2016. NASS obtained 5,697 usable responses, a 13-percent response rate (O'Hara and Lin, 2019). The farmers did not represent a random sample of local food producers since factors such as State, farm size, and market channels were considered when stratifying the sample. As a result, NASS developed weights to create summary statistics.

The survey used three types of weights: nonresponse weighting accounted for operations that did not provide the requested information; coverage weights accounted for under coverage of the sampling frame; misclassification weights accounted for inadvertent reporting errors by respondents. (See Appendix for more details.) These weights were combined with the sample weight to determine the final weight for each record. The weighted sample size is 167,009 farms. These represent all U.S. farms that sold any output for human consumption through a direct marketing channel. Confidential farm-level census records from the survey were accessed under an agreement with NASS to protect data security and confidentiality.

The LFMPS identified “local foods” as those produced and sold for human consumption through four types of marketing channels: direct-to-consumer (DTC); direct-to-retail; direct-to-institution; and direct-to-intermediate market. DTC sales included sales at farmers’ markets, on-farm stores or farm stands located on the operation, roadside stands or stores located off the farm, Community Supported Agriculture (CSA), online marketplace, and other direct-to-consumer markets (e.g., pick-your-own and mobile markets). Direct-to-retail includes sales to supermarkets or supercenters, restaurants or caterers, and other direct-to-retail markets, including independent grocery stores, food cooperatives, small food stores, and corner stores. Direct-to-institution includes sales to K-12 schools, colleges and universities, hospitals, and other markets, including workplace cafeterias, prisons, preschools, food banks, and senior care facilities. Direct-to-intermediate markets include sales to businesses in the middle of the supply chain that market locally branded products, such as distributors, food hubs, brokers, auction houses, wholesale and terminal markets, and food processors.

The survey provided benchmark statistics on the number of farm operations that market food directly, the value of direct sales, and expenses associated with direct marketing. The local food survey definition is a farm having at least \$1,000 in sales or potential sales, which produced and sold food for humans to eat or drink through direct sales outlets. The survey excluded operations such as prisons, schools, churches, or research facilities. Direct sales include edible unprocessed and processed/value-added food products for human consumption. Processed or value-added products have been altered or packaged before selling, including eggs in small cartons, bottled milk, cheese, meat, and wine. The survey also elicited information about farm operation and operator characteristics, marketing and production practices, and performance indicators such as agricultural product sales and farm expenses paid.

Share of Food Sales by Outlet Type

Local food producers sold \$8.7 billion of edible farm products directly to consumers, retailers, institutions, and local distributors in 2015, which is equal to 2.2 percent of agricultural sales made in both 2012 and 2017 (table 1; National Agricultural Statistics Service, Census of Agriculture, 2012 and 2017). Results from 2015 LFMPS and other studies showed that a higher percentage of local food sales were through grocery stores, restaurants, and distributors, rather than directly to consumers (Plakias et al., 2018; Vogel and Low, 2015; Low and Vogel, 2011). Most local foods were sold through intermediaries and institutions (39.1 percent), followed by DTC (34.5 percent) and retailers (26.4 percent) (table 1).⁴ While local food sales are increasing, most of the growth was from intermediated markets (e.g., sales directly to restaurants, grocers, schools, universities, and other institutions) rather than DTC sales (Vogel and Low, 2015). A plateau in DTC sales was attributed to the growing popularity of intermediated markets (Vogel and Low, 2015). Although surveys indicate consumers are willing to pay a premium for local food, they were not willing to pay a premium for purchasing at farmers' markets compared to grocery stores (Printezis and Grebitus, 2018). This possibly reflected limited product offerings at farmers' markets and increases in the time and effort to fulfill grocery needs since consumers may need to shop at multiple locations (Printezis and Grebitus, 2018).

While 34.5 percent of local food sales were directly to consumers, farms selling directly to consumers accounted for 68.7 percent of local food farms (table 1). The popularity of local foods is often gauged by growth in the number of farmers' markets. However, sales via on-site farm stores or stands accounted for 43.7 percent of all DTC sales and 44.8 percent of farms with DTC sales (table 1). Nearly 25 percent of sales were through farmers' markets, and 35.8 percent of farms with DTC sales used this marketing channel. On-site farm stores, farm stands, and farmers' markets were by far the most popular marketing channels for DTC sales. Thirteen percent of DTC farms sold through an off-site store or roadside stand, followed by online marketplaces and CSAs. While the number of farms selling at all other types of DTC outlets—such as pick-your-own or mobile markets—was similar to farmers' markets, overall sales made up 57 percent of farmers' market sales.

⁴For the direct-to-retail marketing channel, 10,988 farms sold directly to restaurants or caterers, while 8,479 sold directly to supermarkets or supercenters (e.g., Walmart, Kroger, Whole Foods Market).

Table 1

Local food sales by type of marketing channel, 2015

Direct sales to:	Number of farms	Percent of farms	Billion dollars	Percent of sales
Consumers ¹	114,801	68.7	3.0	34.5
Farmers' markets	41,156	35.8	0.7	23.5
On-site farm stores or stands	51,422	44.8	1.3	43.7
Off-site stores or roadside stands	14,959	13.0	0.2	7.8
Community Supported Agriculture	7,398	6.4	0.2	7.5
Online	9,460	8.2	0.2	5.7
All other ²	39,765	34.6	0.4	11.9
Retailers	23,624	14.1	2.3	26.4
Intermediate markets and institutions	59,911	35.9	3.4	39.1
Total	167,009³		8.7	100.0

¹Types of direct-to-consumer (DTC) outlets are listed below. The total number of DTC farms (114,801) is less than the sum of individual DTC marketing channels since a farm may use multiple DTC channels. Percent of farms and percent of sales are the percent of DTC farms and DTC sales accounted for by a specific DTC outlet.

²These include pick-your-own operations, mobile markets, etc.

³Less than the sum of individual marketing channels since a farm may use multiple channels.

Source: USDA, National Agricultural Statistics Service, 2015 Local Food Marketing Practices Survey.

Characteristics of Beginning and Experienced Farmers

The Food, Conservation, and Energy Act of 2014 (2014 Agricultural Act) established or modified several USDA farm programs increasing participation of beginning farmers/ranchers and socially disadvantaged farmers.⁵ USDA defines beginning farmers as principal operators with 10 years or less experience on their current operation. In 2012, 25 percent of U.S. farms were operated by beginning farmers (USDA-NASS, 2012 Census of Agriculture) compared to 15 percent of operations selling local food in 2015 (2015 LFMPs data) (table 2).⁶ All beginning farmers and beginning local food producers were more likely to be female and minority compared to all experienced farmers and experienced local food producers (table 2). Beginning and experienced local food producers were more likely to be female and minority compared to all beginning and experienced farmers.

Approximately 30 percent of farmers and local food producers were 55 to 64 years of age, while less than 6 percent were less than 35 years of age (table 2). A larger percentage of beginning local food farmers were less than 35 years of age, and a smaller percentage were over 65 years of age compared to experienced local food farmers. Compared to all farmers, a higher percentage of local food producers were over 65 years of age. This was also the case for beginning local food producers who were more likely to be over 65 years of age than all beginning farmers.

Local food producers tended to operate smaller farms (less than 50 acres) compared to all producers (51 percent versus 39 percent) (table 2). Small farms were more likely to sell through DTC outlets since they are less able to meet the volume demands of retailers and intermediaries, and many rely exclusively on DTC marketing channels (Low and Vogel, 2011). About half of local food producers, both beginning and experienced, operated very small farms (less than 50 acres). While roughly half of all beginning producers also operated very small farms, a smaller percentage of all experienced farmers operated these farms (34 percent). Forty-four percent of local food producers operated in the medium-size category (50-999 acres) compared to 53 percent of all producers, while 4 percent operated in the large-size category (greater than 999 acres) compared to 8 percent of all producers.

As with all beginning farmers, beginning local food producers tended to operate smaller farms compared to experienced local food producers, although the differences were less pronounced. While roughly the same percentage of beginning and experienced local food producers operated farms in the smallest size category, 2.6 percent of beginning local food farmers operated farms exceeding 999 acres. This compares to 4.7 percent of experienced local food farms (table 2).

Small and large farms—measured by total gross value of agricultural products sold, including government payments—accounted for a smaller percentage of farms operated by local food producers compared to all

⁵A socially disadvantaged farmer or rancher is one who belongs to a “socially disadvantaged group.” The Code of Federal Regulations (7 CFR 4284.902) defines this group as members who have been subjected to racial, ethnic, or gender prejudice because of their identity as members of a group without regard to their individual qualities (Rupasingha et al., 2018). Depending on the farm program, socially disadvantaged groups include women, African Americans, Native Americans, Alaskan Natives, Hispanics, Asians, and Pacific Islanders. However, socially disadvantaged farmers have not necessarily experienced prejudice themselves.

⁶The Local Food Marketing Survey defines beginning farmers based on how many years in total the farmer has operated any farm, rather than their current farm. This would result in fewer beginning farmers compared to the Census of Agriculture’s definition. A special tabulation by the 2012 Census of Agriculture found that 27 percent of farm operators who were on their current operation 10 or fewer years had prior experience on another farm.

farmers (table 2).⁷ In contrast to all beginning producers, 11 percent of beginning local food producers operated large farms—farms having a total gross value of sales exceeding \$249,999—compared to 7.9 percent of experienced local food producers. For all producers, 6.4 percent of all beginning farmers operated large farms compared to 13.9 percent of experienced farmers.

Nearly 30 percent of local food producers were in the Atlantic region (29.1 percent), followed by the Midwest (25.5 percent) and West (21.2 percent) (table 2). This compares to 20 percent of all producers who were located in the Atlantic region and 15 percent who were located in the West region. Counties with the highest DTC sales were concentrated in the Northeast and the West Coast (Low and Vogel, 2011). Locating in the coastal regions of the United States was one driver of DTC sales (Low and Vogel, 2011; Low et al., 2015). Over 50 percent of food hubs were found in a broad northeastern quadrant stretching from Wisconsin to North Carolina, and nearly 25 percent are on the West Coast (Low et al., 2015). Counties in which 100 or more farmers used intermediate markets and institutions were concentrated in the Northeast, Mid-Atlantic, and West Coast regions (Low et al., 2015). Regional differences in local food sales may be explained by the availability of logistics and distribution infrastructure (King et al., 2010).

The share of local food producers who are beginning farmers also varied regionally, although the highest share was in the Atlantic region. Thirty-five percent of beginning local food producers were in the Atlantic region, and 27 percent were in the Midwest—both higher than the share of all beginning farmers (20 and 24 percent, respectively). High local food demand may drive relatively more beginning local food producers in these regions (Low and Vogel, 2011). Compared to experienced local food producers, a larger share of beginning local food producers was in the Atlantic, Midwest, and West regions.

Thirty-two percent of all local food producers raised and sold cattle, followed by fruits and vegetables (27.6 percent each) (table 2). A higher percentage of beginning local food producers produced fruits and vegetables compared to experienced local food producers, and a smaller share produced cattle. Commodities local food farms produced differed from all U.S. farms. Cattle and grains and oilseeds were the two most common specific commodity categories all farmers produced—both beginning and experienced. A much smaller share of all farmers produced fruits (5.0 percent) and vegetables (3.4 percent) compared to local food producers, while a larger share produced cattle (35.1 percent) and grains and oilseeds (23.9 percent versus 4.7 percent). The disproportionate presence of fruit and vegetable production among all local food farms influenced the large proportion of local food farms operating on fewer acres (Low and Vogel, 2011). A larger share of local food producers also produced milk and other dairy products, hogs, and nursery products—most notably beginning producers—compared to all farmers.

⁷Total gross value of sales excludes value-added sales but includes the value of commodities used in value-added production. It includes the value of products removed for all crops, livestock, and poultry produced under contract but excludes earnings from land rented to others. Farm expenses paid also include marketing expenses incurred from value-added production and those paid by landlord(s).

Table 2

Principal operator and farm characteristics of beginning and experienced farmers¹

	All producers, 2012 ²			Local food producers, 2015 ³		
	All farms	Beginning	Experienced	All farms	Beginning	Experienced
Number of farms						
Total farms	2,109,303	522,058	1,587,245	167,009	24,747	142,262
Percent of farms						
Percent of total	100.0	24.8	75.2	100.0	14.8	85.2
Percent of principal operators in group						
Age						
<35 years	5.7	18.5	1.0	5.4	18.4	0.5
35 to 44 years	10.2	19.6	7.0	9.7	18.7	6.3
45 to 54 years	22.1	25.3	21.0	17.9	18.4	17.7
55 to 64 years	28.8	22.6	30.9	29.5	26.6	30.6
65 years+	33.2	14.0	40.0	37.5	17.8	44.9
Gender						
Female	14.0	17.5	12.0	16.5	21.0	14.8
Male	86.0	82.5	88.0	83.5	79.0	85.3
Race/ethnicity						
Hispanic	3.2	4.6	2.7	3.0	4.7	2.3
White	95.4	94.8	95.6	90.3	90.3	92.5
Minority ⁴	4.6	5.2	4.4	9.7	9.7	7.5
Percent of farms						
Acres						
<50	38.6	51.1	34.4	51.4	51.1	51.5
50-999	53.2	45.0	55.9	44.2	46.3	43.8
>999	8.2	3.9	9.6	4.4	2.6	4.7
Value of sales ⁵						
\$1-\$49,999	74.8	83.4	72.0	71.2	72.0	71.2
\$50,000-\$249,999	13.1	10.2	14.0	20.9	16.9	20.9
>\$249,999	12.1	6.4	13.9	7.9	11.1	7.9
Location						
South	12.8	13.7	12.5	11.5	8.2	12.1
Midwest	28.1	24.2	29.4	25.5	27.3	25.1
Plains	23.9	25.3	23.4	11.0	3.9	12.2
West	15.1	16.5	14.6	21.2	24.4	20.6
Atlantic	19.7	19.8	19.7	29.1	35.0	28.1
Hawaii and Alaska	0.4	0.5	0.3	1.7	1.3	1.7

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	Products produced and sold					
Grains and oilseeds ⁶	23.9	16.8	26.2	4.7	4.0	4.9
Vegetables ⁷	3.4	4.7	3.0	27.6	33.9	26.4
Fruit ⁸	5.0	5.9	4.7	27.6	31.9	26.9
Nursery ⁹	2.5	2.9	2.4	4.8	8.0	4.3
Other crops ¹⁰	22.7	19.5	23.7	8.9	11.1	8.5
Hogs	2.6	3.3	2.4	5.8	8.1	5.4
Milk and other dairy products	2.4	1.9	2.6	5.2	12.2	4.0
Cattle	35.1	30.8	36.6	31.6	24.3	32.9

Notes: Regions include the following States: South = Alabama, Arkansas, Florida, Georgia, Louisiana, Mississippi, South Carolina; Midwest = Illinois, Indiana, Iowa, Michigan, Minnesota, Missouri, Ohio, Wisconsin; Plains = Kansas, Nebraska, North Dakota, Oklahoma, South Dakota, Texas; West = Arizona, California, Colorado, Idaho, Montana, Nevada, New Mexico, Oregon, Utah, Washington, Wyoming; Atlantic = Connecticut, Delaware, Kentucky, Maine, Maryland, Massachusetts, New Hampshire, New Jersey, New York, North Carolina, Pennsylvania, Tennessee, Vermont, Virginia, West Virginia, Rhode Island.

¹Beginning farmer is defined as an individual independent producer that has operated a farm for 10 or fewer years. All other farmers are experienced. Census of Agriculture bases these classifications on the number of years operating the current farm. Classifications from the Local Food Survey are based on the number of years operating any farm.

²USDA, National Agricultural Statistics Service, 2012 Census of Agriculture.

³USDA, Economic Research Service, compiled from the 2015 Local Food Marketing Practices Survey.

⁴Non-White. Includes American Indian/Alaska Native, Black, Asian, Pacific Islander, and multi-race. The percentage of local food farmers that are White and minority sums to 100 percent.

⁵Total gross value of sales, including Government agricultural payments.

⁶Includes dry beans and peas, corn, flaxseed, grain silage and forage, popcorn, rice, small grains, sorghum, soybeans, sunflowers, straw, etc.

⁷Includes potatoes, beets, cabbage, cantaloupes, pumpkins, sweet corn, tomatoes, watermelons, vegetable seeds, etc.

⁸Includes almonds, apples, blueberries, cherries, grapes, hazelnuts, kiwifruit, oranges, pears, pecans, strawberries, walnuts, etc.

⁹Includes bedding plants, bulbs, cut flowers, flower seeds, foliage plants, mushrooms, nursery potted plants, shrubbery, sod, food crops grown under protection, etc.

¹⁰Includes grass seed, hay and grass silage, hops, maple syrup, mint, peanuts, sugarcane, sugarbeets, etc.

Source: USDA, Economic Research Service compiled from the 2015 Local Food Marketing Practices Survey and USDA, National Agricultural Statistics Service, 2012 Census of Agriculture.

Defining Types and Levels of Experience for Local Food Producers

The LFMPS offered a unique opportunity to examine farming experience and direct marketing experience to reveal how producer behavior was related to these types of experiences.⁸ Operators who participated in direct marketing may use different marketing approaches and information as marketing experience levels vary compared to those with different levels of farm experience.

Respondents provided information on the year the operation first produced and sold food directly to consumers, a retail market, an institution, and an intermediate market.⁹ Direct marketing experience is defined as years selling food in a channel—consumer, retail market, institution, or intermediate market channels—where they had their highest sales in 2015, rather than the total number of years selling in a channel. For example, the survey could include a producer who had 51 percent of total local food sales directly to consumers in 2015 and 1 percent directly to retailers. This producer may also have sold to consumers for 1 year and to retailers for 15 years. We classified marketing experience based on sales to consumers, resulting in 1 year of experience, as the most appropriate measure that affects adoption and use of marketing practices. We assumed that producers relied most heavily on their experience in selling to consumers to generate sales.

Years selling in the direct marketing channel with the most sales defined direct marketing experience—rather than the channel the producer sold in the longest—for several reasons. First, it is likely the channel most influenced sales performance, resource use, management practices, and use of marketing tools. Sales are assumed to be a more accurate measure of effort and most closely influenced marketing practices. The question about year of entry to a market could reflect very minimal effort from the producer. For example, if a producer sold 1 percent or even \$1 in a channel, that year would be registered. Yet, current sales in that channel could still be minimal and have little influence on resource use, marketing planning efforts, and business management practices.

Second, the respondent had the most information about current sales, with most likely minimal measurement error. The respondent needed to carefully consider the responses and was reminded of consistency in sales for each category and in total sales. The detail required could lead the respondent to consult financial records and provide accurate values. Conversely, the date of the first selling effort in a channel is subject to significant measurement error. The person who answered questions about sales by working from records may be unaware of the initial year of entry to a market. The year-of-entry variable was subject to a significant degree of measurement error—extreme values and clear guesses—along with missing values. Missing dates and misrecorded data—or data that did not align with other information in the survey—increased as the respondent moved through the survey to answer the question about the year of entry to a market. No such problems occurred with the sales data.

Third, we incorporated years of selling in developing experience categories, so we included it in the analysis. Years of selling through a particular channel is supplemented with sales, where sales indicate a commitment to a channel. Sales reflect the value generated from experience, just as any earnings measure in labor markets reflects experience. We believe using the channel with the greatest experience to categorize producers resulted

⁸Insight into direct marketing experience is not provided in Agricultural Resource Management Survey (ARMS), which was the main data source for previous research on direct marketing, including farm characteristics and local food sales (Low and Vogel, 2011; Low et al., 2015). ARMS records the years of farming experience only.

⁹In addition to farming experience, these survey questions reveal specific interest by USDA in direct marketing channel experience.

in a loss of information and measured only a simple accounting of time, an input. It would not account for how effectively the producer leveraged that input to benefit the operation and expand sales.

We delineated three experience levels for both farm operating and direct marketing: first-year, inexperienced, and experienced. These categories are defined depending on the type of experience (table 3). For experience operating a farm, we added a category of first-year farmers to the USDA definition of beginning farmers. We delineated those with no more than 1 year of experience—or first-year farmers—and inexperienced farmers who have 2-10 years of experience.¹⁰ Producers who have operated a farm for more than 10 years are referred to as experienced farmers. First-year direct marketers are those with no more than 1 year of experience, and inexperienced direct marketers are those with 2-5 years of experience. Experienced direct marketers are those with more than 5 years of direct marketing experience.¹¹

Table 3
Percent of local food producers by type and years of experience

Levels of experience	Definition	Percent of farmers
Experience operating any farm		
First-year	Producer who has operated a farm for no more than 1 year.	0.8
Inexperienced	Producer who has operated a farm from 2 to 10 years.	14.0
Experienced	Producer who has operated a farm for more than 10 years.	85.2
Experience selling in the direct marketing channel with the largest dollar volume		
First-year	Producer who began selling no more than 1 year ago to the direct marketing outlet with the most food sales.	4.6
Inexperienced	Producer who began selling from 2 to 5 years ago to the direct marketing outlet with the most food sales.	19.1
Experienced	Producer who began selling more than 5 years ago to the direct marketing outlet with the most food sales.	76.4

Source: USDA, Economic Research Service compiled from the 2015 Local Food Marketing Practices Survey.

A shorter time period of 2 to 5 years defines farmers as inexperienced direct marketers compared to inexperienced farmers since entry into direct marketing channels is easier than entry into farming. Some barriers to operating a farm include lack of access to resources such as land, labor, capital, and networks (Ahearn, 2009; Liang, 2018). Farmers may find it easier to enter direct marketing once they are farming (e.g., setting up a farm stand or establishing CSA). For example, farms located in areas with more operators whose primary occupation is farming were more likely to market products through CSA (Dong et al., 2019). These operators might have a good relationship with the local community and are more interested in local food and local development. Much of the growth in U.S. local food sales likely reflected the behavior of farmers who looked for ways to expand their customer base by entering new marketing channels (Connolly and Klaiber, 2019).

Marketing involves transferring products from production to consumption and requires a different skill set than production activities. Production skills and marketing decisions affect how efficiently a farm business uses its assets to generate gross revenues and the impact of cost control strategies (Miller et al., 2012). Park et al. (2014) found that operators with a broader portfolio of marketing skills were more likely to increase farm sales compared to farmers who used fewer marketing skills. Effective marketing must overcome barriers between sellers and buyers that limit a producer’s ability to efficiently meet consumer needs (Boys and Fraser, 2019).

¹⁰A study by Katchova and Ahearn (2012) using the Census of Agriculture data confirms the number of farms entering agriculture is higher than what is recorded in the Census data and statistics. The authors conclude that the “number of farms operating in their first three years needs to be adjusted as it takes time for new farmers to be ‘discovered’ by USDA.”

¹¹The LFMPS records the year that the farm first began direct marketing or the number of years that the farmer has operated any farm. Therefore, we observe only whole years rather than portions of a year. For example, we do not observe 1- 1/2 years.

Most local food producers were experienced in operating a farm and direct marketing. Eighty-five percent of local food producers operated a farm for more than 10 years, and over 75 percent had more than 5 years of direct marketing experience. Less than 5 percent of local food producers were first-year producers for both types of experience.

The data revealed a consistent pattern linking farming and direct marketing experience. Most operators—66 percent—were experienced in both farm production and direct marketing. Only a very small share of operators begin farming and direct marketing efforts simultaneously. Across each level of direct marketing experience—first-year, inexperienced, and experienced—experienced farmers accounted for the largest share. Over 80 percent of operators in each category of direct marketing experience had more than 10 years of farming experience. Thus, most operators in the survey had extensive farming backgrounds. This pattern also suggested that operators with the most farming experience had varying degrees of experience with direct marketing. Direct marketing experience and farming experience were not highly correlated. The correlation between the types of experience was statistically significant, but only 0.05.¹²

¹²A correlation coefficient measures the strength of relationship between two variables. It ranges from -1 to +1. A positive value suggests that both variables move together, while a negative value suggests that when one variable increases, the other variable decreases. A correlation coefficient closer to zero means that the two variables are less correlated.

Beginning and Experienced Local Food Producers: Location and Products Produced

A larger share of farmers with less farming experience resides in the West. Nearly 50 percent of first-year farmers were in the West, compared to 23 percent of inexperienced farmers and 21 percent of experienced farmers (table 4). Larger shares of inexperienced farmers were located in the Atlantic and Midwest regions compared to first-year and experienced farmers, while smaller shares of first-year farmers were located in these regions.

Table 4

Regional location of local food farms by levels of direct marketing and farming experience, 2015¹

Region	First-year farmers	Inexperienced farmers	Experienced farmers	All local food farmers
Farming experience				
Number of farms				
Total farms	1,304	23,443	142,262	167,009
Percent of farms				
South	5.9	8.3	12.1	11.5
Midwest	20.3	27.7	25.1	25.5
Plains	D	4.1	12.2	11.0
West	49.0	23.0	20.7	21.2
Atlantic	23.6	35.6	28.1	29.1
Hawaii and Alaska	D	1.3	1.7	1.7
Direct marketing experience				
Number of farms				
Total farms	7,626	31,868	127,515	167,009
Percent of farms				
South	9.7	7.9	12.6	11.5
Midwest	27.2	23.2	25.9	25.5
Plains	1.2	13.8	10.9	11.0
West	44.8	17.2	20.8	21.2
Atlantic	16.6	36.2	28.1	29.1
Hawaii and Alaska	0.7	1.8	1.7	1.7

Notes: D = Not disclosed due to insufficient observations.

Regions include the following States: South = Alabama, Arkansas, Florida, Georgia, Louisiana, Mississippi, South Carolina; Midwest = Illinois, Indiana, Iowa, Michigan, Minnesota, Missouri, Ohio, Wisconsin; Plains = Kansas, Nebraska, North Dakota, Oklahoma, South Dakota, Texas; West = Arizona, California, Colorado, Idaho, Montana, Nevada, New Mexico, Oregon, Utah, Washington, Wyoming; Atlantic = Connecticut, Delaware, Kentucky, Maine, Maryland, Massachusetts, New Hampshire, New Jersey, New York, North Carolina, Pennsylvania, Tennessee, Vermont, Virginia, West Virginia, Rhode Island.

¹See table 3 for definitions of first-year, inexperienced, and experienced farmers based on levels of direct marketing and farming experience.

Source: USDA, Economic Research Service compiled from the 2015 Local Food Marketing Practices Survey.

We found similar results for direct marketing experience, with a few exceptions. A higher percentage of first-year direct marketers (27 percent) were in the Midwest compared to inexperienced (23 percent) and experienced (26 percent) direct marketers. The West appeared to have smaller shares of producers with less direct marketing experience compared to farming experience. That is, 45 percent of first-year direct marketers and 17 percent of inexperienced direct marketers were in the West compared to 49 percent of first-year farmers and 23 percent of inexperienced farmers. The Atlantic region also accounted for a smaller share of first-year direct marketers when compared to first-year farmers.

Differences in the types of products produced and sold by beginning farmers were delineated by first-year and inexperienced farmers. A smaller share of farmers with higher levels of farming experience produced and sold fruits and vegetables (table 5). Nearly 70 percent of first-year farmers produced fruit. In contrast, a greater share of farmers with higher levels of experience produced cattle. Only 8 percent of first-year farmers produced cattle compared to 25 percent of inexperienced farmers and 33 percent of experienced farmers.

Similarities and differences existed in products produced and sold among levels of direct marketing experience and farming experience. While a relatively large share of first-year direct marketers also produced fruit (42 percent), a smaller share of inexperienced direct marketers produced fruit (20 percent) compared to experienced direct marketers (29 percent). Smaller shares of first-year and inexperienced direct marketers produced fruits and vegetables compared to first-year and inexperienced farmers. Unlike farming experience, little difference existed in the share of farmers producing vegetables across direct marketing experience levels.

Producers with more direct marketing experience produced a larger share of cattle. However, the shares produced by first-year (18 percent) and inexperienced (31 percent) direct marketers were larger than the same categories based on farming experience (8 percent and 25 percent, respectively). As with location, only small differences were found in the types of products produced and sold by experienced farmers and direct marketers.

Table 5

Share of local food farms that produce and sell crops and livestock through any direct marketing channel by levels of direct marketing and farming experience, 2015¹

Category	First-year farmers	Inexperienced farmers	Experienced farmers	All local food farmers
Farming experience				
Number of farms				
Total farms	1,304	23,443	142,262	167,009
Percent of farms				
Grains and oilseeds ²	5.1	3.9	4.9	4.7
Vegetables ³	34.2	33.9	26.4	27.6
Fruit ⁴	66.6	30.0	26.9	27.6
Nursery ⁵	12.3	7.8	4.3	4.8
Other crops ⁶	11.4	11.0	8.5	8.9
Hogs	2.8	8.4	5.4	5.8
Milk and other dairy products	4.4	12.7	4.0	5.2
Cattle	8.2	25.2	32.9	31.6
Direct marketing experience				
Number of farms				
Total farms	7,626	31,868	127,515	167,009
Percent of farms				
Grains and oilseeds ²	2.6	5.0	4.8	4.7
Vegetables ³	27.2	28.0	27.5	27.6
Fruit ⁴	41.8	20.2	28.6	27.6
Nursery ⁵	5.8	7.5	4.1	4.8
Other crops ⁶	3.4	5.5	10.0	8.9
Hogs	D	4.8	6.3	5.8
Milk and other dairy products	D	3.1	6.1	5.2
Cattle	18.0	31.3	32.5	31.6

Notes: D = Not disclosed due to insufficient observations.

¹See table 3 for definitions of first-year, inexperienced, and experienced farmers based on levels of direct marketing and farming experience.

²Includes dry beans and peas, corn, flaxseed, grain silage and forage, popcorn, rice, small grains, sorghum, soybeans, sunflowers, straw, etc.

³Includes potatoes, beets, cabbage, cantaloupes, pumpkins, sweet corn, tomatoes, watermelons, vegetable seeds, etc.

⁴Includes almonds, apples, blueberries, cherries, grapes, hazelnuts, kiwifruit, oranges, pears, pecans, strawberries, walnuts, etc.

⁵Includes bedding plants, bulbs, cut flowers, flower seeds, foliage plants, mushrooms, nursery potted plants, shrubbery, sod, food crops grown under protection, etc.

⁶Includes grass seed, hay and grass silage, hops, maple syrup, mint, peanuts, sugarcane, sugarbeets, etc.

Source: USDA, Economic Research Service compiled from the 2015 Local Food Marketing Practices Survey.

Practices Used by Beginning and Experienced Local Food Producers

E-commerce refers to a means by which producers can obtain and transmit information, build and maintain relationships, as well as conduct transactions of goods, services or payments through telecommunication networks (Carpio and Lange, 2015). Proponents of e-commerce in agricultural markets suggest it could boost profitability by increasing sales and decreasing search and transactions costs. E-commerce may also provide a means to market a wide variety of products to larger numbers of potential customers at competitive prices. E-commerce includes activities conducted using the internet. Although 67 percent of U.S. farms had access to the internet in 2013, only 16 percent reported purchasing agricultural inputs, and 14 percent reported engaging in marketing activities—such as sales, auctions, commodity price tracking, and online market advisory services—over the internet (Carpio and Lange, 2015).

One key factor identified for e-commerce success was the use of innovative, attractive, and easily navigable websites (Carpio and Lange, 2015). E-commerce is a viable option for connecting agribusinesses and consumers within the food marketing system.

Farm management records include the balance sheet (or net worth statement), one of three financial statements that provide important information about a farm business. Completing an annual balance sheet, income statement, and statement of cashflows helps farm businesses understand their financial health. Other farm management records include business and marketing plans. Such plans help producers demonstrate that they fully researched their proposal, know how to produce and market their product, and can manage financial risk.

Third-party certification provides assurances to consumers that the information firms supply is correct (Golan et al., 2000). Consumers may question the validity of information firms provide, particularly for credence goods. Such goods have attributes that consumers cannot evaluate even in use. For example, consumers cannot inspect produce items to determine if they were grown organically. Third-party certification provides consumers with an objective evaluation of the product's quality attributes and helps firms establish credible marketing claims. Through accreditation, third-party certification can establish credentials of other third-party services, including certifiers. For example, USDA accredits third-party certifiers for the National Organic Program. Most certified products include claims on packaging to help consumers and buyers make educated purchasing decisions. Such claims include “raised without antibiotics,” “humanely raised,” and “organic.”

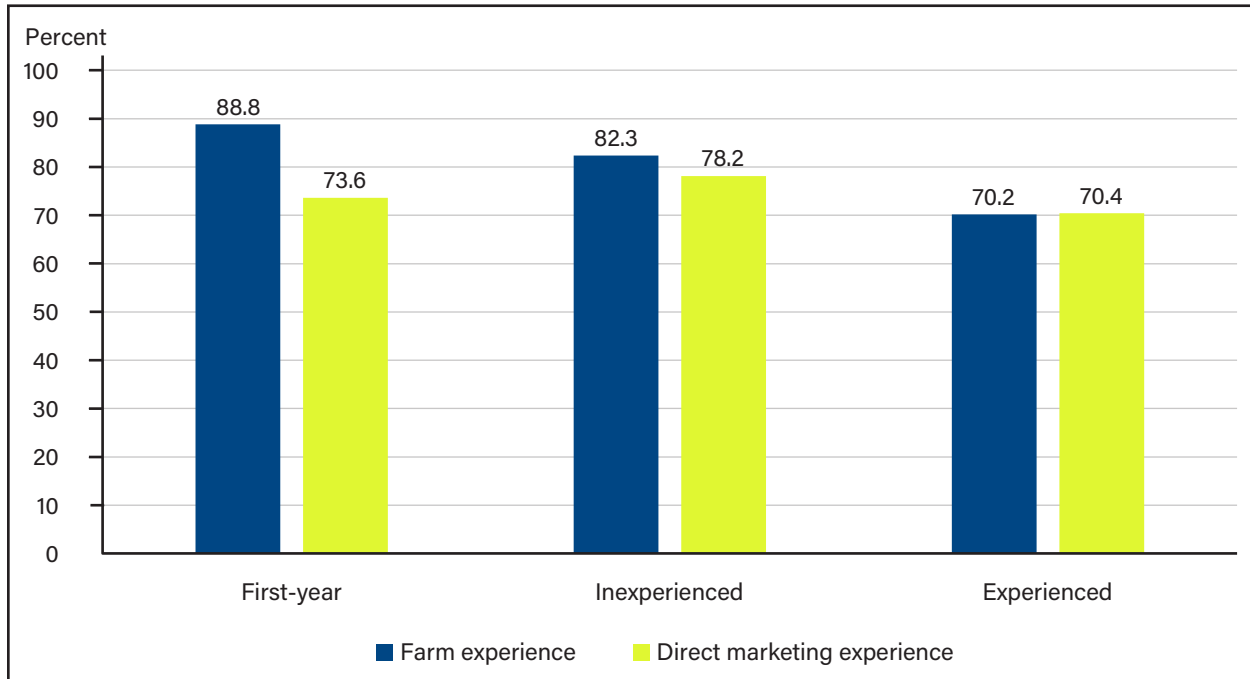
Several USDA programs support local and regional food producers and farmers who have owned and operated a farm for no more than 10 years. These programs serve different purposes and have different eligibility and enrollment requirements. In some cases, the 2014 Farm Bill reprioritized the program to better target beginning farmers or included additional preferences for beginning farmers.

Internet Access and Use

Seventy-two percent of local food operations had internet access in 2015, either at the operation site or at the principal operator's residence. This compares to 70 percent of all farms that had internet access in 2015 (USDA-NASS, 2015). The geographic proximity of local food producers to urban areas may account for this difference. Proximity to urban markets is strongly related to the production of directly sold goods (Low and Vogel, 2011). Broadband adoption is higher among urban households than rural households (O'Hara and Low, 2020).

A higher percentage of first-year and inexperienced local food farmers had internet access compared to experienced farmers (figure 1).¹³ Operators of beginning farms tend to be younger than more established farmers (table 2). Since older producers tend to embrace new technology more slowly, they are less likely to engage in e-commerce (Carpio and Lange, 2015). A higher percentage of first-year and inexperienced direct marketers had internet access than those with the highest levels of experience in direct marketing.

Figure 1
Local food farmers with internet access, 2015



Note: See table 3 for definitions of first-year, inexperienced, and experienced farmers based on levels of direct marketing and farming experience.

Source: USDA, Economic Research Service compiled from the 2015 Local Food Marketing Practices Survey.

A higher percentage of first-year and inexperienced farmers had internet access compared to first-year and inexperienced direct marketers. This is in line with findings regarding the negative correlation between farming experience and the percentage of local food producers with internet access. First-year and inexperienced direct marketers included experienced farmers who accessed the internet to a lesser extent compared to other levels of farming experience.

Six questions in the survey regarded local food producers' internet use. The most popular internet use was for purchasing farm inputs (44 percent), including commodities, equipment, and other farm materials (table 6). This was followed by accessing price and market information from sources other than USDA Market News (35 percent); conducting online business, such as business planning, accounting, and legal and banking services (32 percent); and accessing learning resources, such as webinars, tutorials, and peer user groups (29 percent). In comparison, 19 percent of all U.S. farms reported purchasing agricultural inputs over the internet in 2015 (USDA-NASS, 2015). Only 9 percent of local food producers sought funding opportunities using the internet (i.e., identifying and applying for funding, grants, subsidy requests, or proposals).

¹³All differences are statistically significant.

Table 6

Local food farmers' internet usage by levels of direct marketing and farming experience, 2015¹

Item	First-year farmers	Inexperienced farmers	Experienced farmers	All local food farmers
Farming experience				
Number of farms				
Total farms	1,304	23,443	142,262	167,009
Percent of farms				
Purchasing items for farm	75.8	62.3	40.9	44.1
Other sources of price and market information	60.0	46.2	32.4	34.5
Online business resources	32.3 ²	49.3	29.5 ²	32.3
Online learning resources	21.2	50.2	25.4	28.8
USDA Market News	15.0	29.0	23.0	23.7
Funding opportunities	11.7	15.2	7.5	8.6
Direct marketing experience				
Number of farms				
Total farms	7,626	31,868	127,515	167,009
Percent of farms				
Purchasing items for farm	49.1	54.3	41.3	44.1
Other sources of price and market information	58.6	36.3	32.7	34.5
Online business resources	45.5	34.4	31.0	32.3
Online learning resources	43.9	34.4	26.6	28.8
USDA Market News	46.4	28.9	21.1	23.7
Funding opportunities	13.3	12.2	7.5	8.6

¹See table 3 for definitions of first-year, inexperienced, and experienced farmers based on levels of direct marketing and farming experience.

²Indicates paired differences are not statistically significant.

Source: USDA, Economic Research Service compiled from the 2015 Local Food Marketing Practices Survey.

Based on farm experience, except for purchasing farm inputs and accessing non-USDA price/market information, a higher percentage of inexperienced local food farmers used the internet for all purposes compared to first-year and experienced farmers (table 6). A larger share of first-year farmers used the internet to purchase farm inputs (76 percent) and access price/market information other than USDA Market News (60 percent), followed by inexperienced farmers (62 percent and 46 percent, respectively) and experienced farmers (41 percent and 32 percent, respectively).

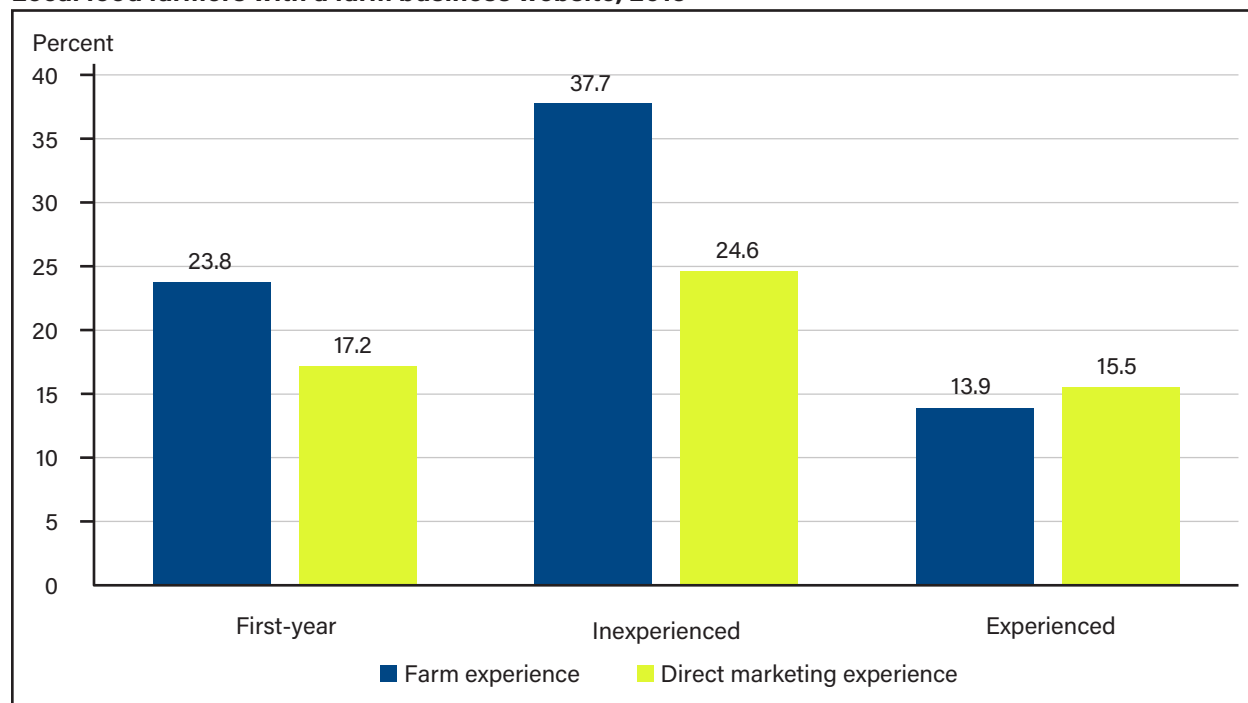
Only 15 percent of first-year farmers relied on USDA Market News (table 6). This product of the USDA, Agricultural Marketing Service provides price and sales information to assist in marketing and distributing edible and nonedible farm products. The reports provide information to evaluate market conditions, identify trends, and monitor price patterns. USDA Market News also provides price, volume, and other information on agricultural commodities sold at local and regional markets. Information gathered from farmers' markets, food hubs, direct-to-consumer outlets, and farm-to-school programs is provided for select locations.

A larger share of first-year direct marketers used the internet for all purposes, except purchasing farm inputs, followed by inexperienced and experienced direct marketers (table 6). Using the internet to purchase farm items was most popular with inexperienced farmers.

Use of a Farm Business Website

Overall, 17 percent of local food producers had a farm business website. Inexperienced farmers accounted for the highest percentage of farmers using a farm business website (figure 2). A smaller percentage of experienced farmers used a farm business website, which is consistent with findings regarding their internet access. Compared to direct marketing experience, a higher percentage of first-year and inexperienced farmers had a farm business website.

Figure 2
Local food farmers with a farm business website, 2015



Note: See table 3 for definitions of first-year, inexperienced, and experienced farmers based on levels of direct marketing and farming experience.

Source: USDA, Economic Research Service compiled from the 2015 Local Food Marketing Practices Survey.

Three survey questions covered the use of a farm business website to (1) provide farm background/history, (2) advertise products for sale and on-farm activities/services, and (3) carry out transactions and sell farm products online. Nearly 15 percent of local food producers used a business website to provide farm background information and advertise products and services, while only 5 percent sold farm products online (table 7). A higher percentage of inexperienced farmers used the website for all three purposes compared to other levels and types of experience. Experienced farmers used a business website less for all three purposes compared to first-year farmers, while the opposite was true for direct marketing experience.

Table 7

Local food farmers' use of a farm business website by levels of direct marketing and farming experience, 2015¹

Item	First-year farmers	Inexperienced farmers	Experienced farmers	All local food farmers
Farming experience				
Number of farms				
Total farms	1,304	23,443	142,262	167,009
Percent of farms				
Provide farm background and history	23.6	34.2	11.3	14.6
Advertise farm products and services offered	21.0	33.2	10.9	14.1
Sell farm products online	6.8	11.5	4.0	5.1
Direct marketing experience				
Number of farms				
Total farms	7,626	31,868	127,515	167,009
Percent of farms				
Provide farm background and history	8.5	21.7	13.2	14.6
Advertise farm products and services offered	11.6	21.0	12.6	14.1
Sell farm products online	1.6	8.0	4.6	5.1

¹See table 3 for definitions of first-year, inexperienced, and experienced farmers based on levels of direct marketing and farming experience.

Source: USDA, Economic Research Service compiled from the 2015 Local Food Marketing Practices Survey.

Accessing Farm Management Records

LFMPS reported whether the operation maintained five types of farm management records:

- The balance sheet describing all assets owned by the business and listing all liabilities or financial obligations at a specific date. It provides a measure of farm business growth, liquidity, solvency, and risk-bearing capacity.
- A farm income statement—or profit and loss statement—is a summary of income and expenses for a specified accounting period. Income statements can be used to determine income tax payments, analyze a business' expansion potential, evaluate the profitability of an enterprise, and assist in loan repayment analysis.
- A cashflow statement shows current cash available to pay debts and operating expenses, enabling more efficient use of cash. A cashflow projection summarizes cash inflows and outflows over a given period. The cashflow projection can help determine the need for operating lines of credit to cover cashflow deficits and the need for changes in marketing or expenditure plans.
- Written farm business plans state business goals, how to achieve them, and steps to accomplish them.
- A separate marketing plan states marketing goals, how to achieve them, and steps to accomplish them.

Over 50 percent of local food producers used an income statement and balance sheet, not surprising as they are fundamental financial statements (table 8). However, only 24 percent of local food producers used a cashflow statement. Fewer than 15 percent used a written business plan, and even fewer used a separate marketing plan. Compared to commercial farms in Illinois that were enrolled in Illinois Farm Business Farm Management—the largest record-keeping program in the country—a higher percentage of local food producers used a balance sheet and cashflow statement. Even with assistance from full-time staff, 43 percent of members of Illinois Farm Business Farm Management completed an annual balance sheet, and only 22 percent reconciled cashflow accounts (Ellinger et al., 2012).

Table 8

Local food farmers' maintenance of farm management records by levels of direct marketing and farming experience, 2015¹

Item	First-year farmers	Inexperienced farmers	Experienced farmers	All local food farmers
Farming experience				
Number of farms				
Total farms	1,304	23,443	142,262	167,009
Percent of farms				
Balance sheet	37.5	62.3	50.5	52.1
Income statement	29.7	63.4	52.9	54.2
Cashflow budget or projection	16.3	40.6	21.3	24.0
Written business plan	10.5 ²	26.7	12.5 ²	14.4
Separate marketing plan	5.9 ²	13.8	7.8 ²	8.7
Direct marketing experience				
Number of farms				
Total farms	7,626	31,868	127,515	167,009
Percent of farms				
Balance sheet	64.1	52.3	51.3	52.1
Income statement	63.9	51.4	54.3	54.2
Cashflow budget or projection	25.7 ²	26.3 ²	23.3	24.0
Written business plan	10.7	21.5	12.9	14.4
Separate marketing plan	3.4	9.2 ²	8.8 ²	8.7

¹See table 3 for definitions of first-year, inexperienced, and experienced farmers based on levels of direct marketing and farming experience.

²Indicates paired differences are not statistically significant.

Source: USDA, Economic Research Service compiled from the 2015 Local Food Marketing Practices Survey.

Balance sheets and income statements were the most popular farm management records among experience levels and experience types (table 8). Over 60 percent of new entrants into direct marketing and inexperienced farmers used a balance sheet and income statement. First-year farmers used the other three management records to a lesser extent compared to other experience levels, while a higher percentage of inexperienced farmers used farm management records.

A smaller percentage of first-year farmers and direct marketers maintained a written business plan or marketing plan compared to more experienced farmers and direct marketers. Farmers can use business plans to evaluate production alternatives, identify new market opportunities, and communicate ideas to lenders and USDA to determine what programs can support their operation. Producers considering innovative management practices and immature markets can use business plans to map out strategies to take advantage of new opportunities, such as on-farm processing and direct marketing (DiGiacomo et al., 2003).

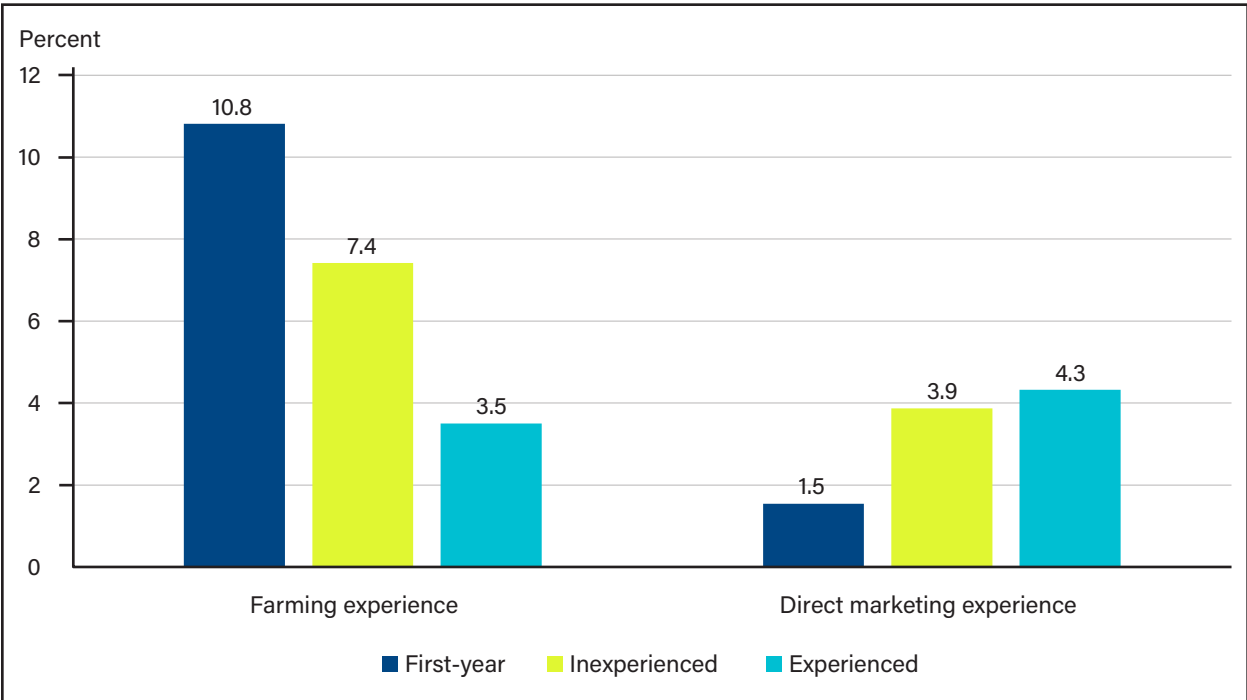
Third-Party Certification and Food Safety

LFMPS elicited information concerning six third-party certification programs, including USDA Certified Organic; pasture-based management (e.g., grass fed, free range, and pasture raised); animal-care based management (e.g., cage free, raised without antibiotics, animal welfare approved, and certified humane); Naturally Grown Certified; other USDA labels/quality verification; and other third-party certified or verified practices, excluding food safety practices. Among all local food producers, fewer than 7 percent participated

in any of the programs. When delineated by experience levels, one notable result is that 44 percent of first-year farmers—based on farming experience—used USDA labels/quality verification practices other than those specifically listed. However, the specific types of practices were not identified. A higher percentage of first-year farmers—based on direct marketing experience—used other USDA and third-party certified practices compared to specifically named practices and other experience levels.

A small percentage of local food producers participated in the USDA Certified Organic program (figure 3). Over 10 percent of first-year farmers participated in the program, followed by 7 percent of inexperienced farmers and 4 percent of experienced farmers. Based on direct-marketing experience, fewer than 5 percent of farmers across all experience levels participated in the program. These results are consistent with Ahearn et al., (2018) who found organic production to be insignificant in affecting the gross cash farm income of local food producers. Another factor may be the time and cost associated with obtaining certification of organic products.

Figure 3
Local food farmers with USDA Certified Organic products by type and levels of experience, 2015



Note: See table 3 for definitions of first-year, inexperienced, and experienced farmers based on levels of direct marketing and farming experience.

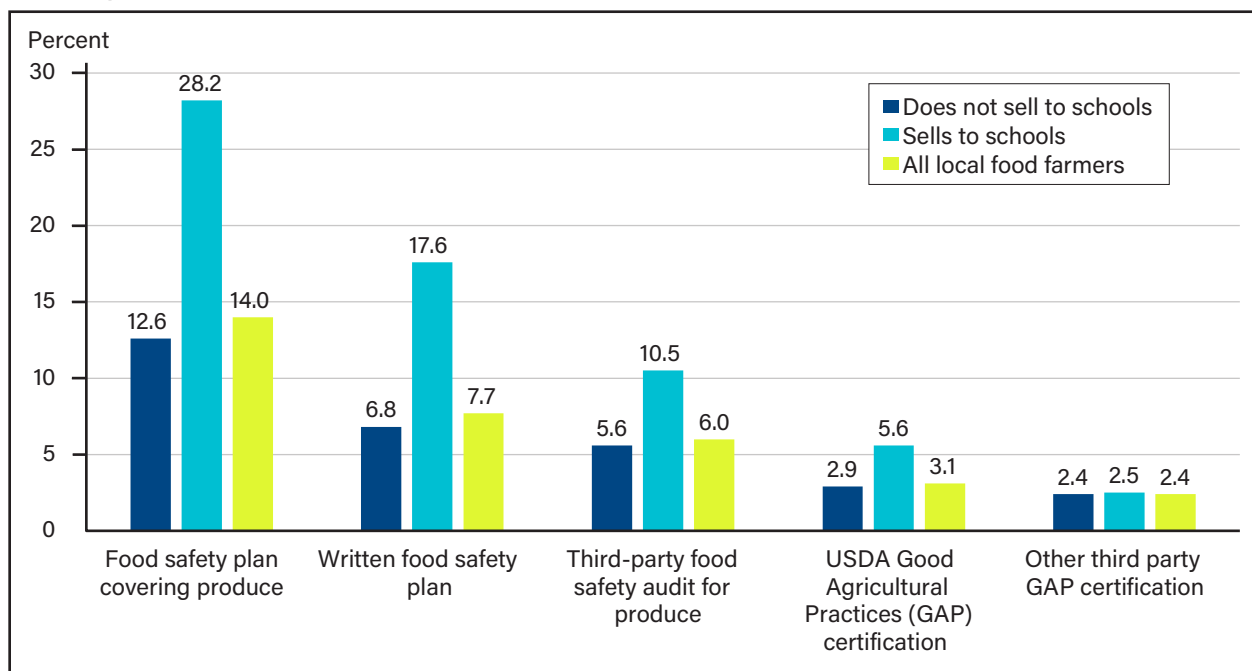
Source: USDA, Economic Research Service compiled from the 2015 Local Food Marketing Practices Survey.

The popularity of local foods raises concerns for the safety of such foods sold at local outlets. One study found higher counts of coliform bacteria—a common indicator of the sanitary quality of foods—in farmers' market produce compared to supermarkets (Roth et al., 2018). Scheinberg et al. (2018) identified several high-risk behaviors related to food safety at farmers' markets, including insufficient handwashing, personal hygiene, and cross contamination. Motta and Sharma (2016) found that school foodservice administrators categorized food safety as a major component of transaction costs in the purchase of locally grown products.

Among operations selling local foods, 27.6 percent sold fruits and nuts or vegetables through direct marketing channels, second only to beef locally sold at 31.6 percent (USDA-NASS, 2016). Despite the importance of food safety risks to farm sales and profitability, only 14 percent of local food producers had a food safety plan covering produce (figure 4). More than half of these producers (7.7 percent) had a written plan. Six percent of local food producers had a third-party food safety audit of produce. Among these producers, 51 percent were Good Agricultural Practices (GAP) certified by USDA—3.1 percent of all local food producers—and 39 percent were GAP certified by another third party or 2.4 percent of all local food producers.¹⁴

Local food producers that sold directly to schools accounted for 8.5 percent of all local food produced. A higher share of these producers adopted food safety practices compared to those that did not sell to schools (figure 4). When visiting local farmers, foodservice managers often asked for documentation like GAP certificates as an indicator of food safety (Motta and Sharma, 2016).

Figure 4
Food safety practices used by local food farmers that sell to schools and those that do not sell to schools, 2015



Source: USDA, Economic Research Service compiled from the 2015 Local Food Marketing Practices Survey.

¹⁴GAP is a set of production guidelines designed to reduce the likelihood of microbial or other contamination of fresh fruits and vegetables. All producers, including small producers of locally marketed fruit and vegetables, are encouraged to be GAP compliant (Low et al., 2015).

A larger share of first-year farmers used food safety practices, followed by inexperienced farmers and experienced farmers (table 9). Notably, nearly half of first-year farmers had a third-party food safety audit, and nearly all those farms were USDA GAP certified or 47.2 percent of all farms. One-fifth of first-year and inexperienced farmers had a food safety plan for produce, and over half of these plans were written.

Table 9

Local food farmers' food safety practices by levels of farming and direct marketing experience, 2015¹

Item	First-year farmers	Inexperienced farmers	Experienced farmers	All local food farmers
Farming experience				
	Number of farms			
Total farms	1,304	23,443	142,262	167,009
	Percent of farms			
Food safety plan covering produce	20.8 ²	20.1 ²	12.9	14.0
Written food safety plan	11.9 ²	11.4 ²	7.0	7.7
Third-party food safety audit for produce	48.7	7.3	5.4	6.0
USDA Good Agricultural Practices (GAP) certifications	47.2	3.8	2.6	3.1
Other third-party GAP certification	4.4 ²	3.4 ²	2.2	2.4
Direct marketing experience				
	Number of farms			
Total farms	7,626	31,868	127,515	167,009
	Percent of farms			
Food safety plan covering produce	8.5	16.3	13.7	14.0
Written food safety plan	3.6	8.0 ²	7.9 ²	7.7
Third-party food safety audit of produce	1.8	6.1 ²	6.3 ²	6.0
USDA Good Agricultural Practices (GAP) certifications	0.6	2.4	3.4	3.1
Other third-party GAP certification	1.3 ²	1.6 ²	2.6	2.4

¹See table 3 for definitions of first-year, inexperienced, and experienced farmers based on levels of direct marketing and farming experience.

²Indicates paired differences are not statistically significant.

Source: USDA, Economic Research Service compiled from the 2015 Local Food Marketing Practices Survey.

A smaller percentage of inexperienced local food producers, based on direct marketing experience, used food safety practices compared to farming experience. Programs such as the Beginning Farmer and Rancher Development Program (BFRDP) may assist newer farmers in becoming more aware of current best practices. The BFRDP—administered by USDA's National Institute of Food and Agriculture (NIFA)—is the only Federal program exclusively dedicated to training the next generation of farmers (Ackoff et al., 2017). BFRDP funding can develop incubator farm programs, provide business planning and food safety training services, and establish on-farm apprenticeship opportunities to train future farmers and farm workers.

Participation in USDA Programs

The 2015 LFMPS included a question about participation in five USDA programs: Value-Added Producer Grant Program; the Environmental Quality Incentives Program; Farm Loan Programs; Whole-Farm Revenue Protection Program; and Noninsured Crop Disaster Assistance Program. Fewer than 6 percent of local food operations participated in any of the programs.

Only 0.9 percent of local food operations participated in the Value-Added Producer Grant Program (VAPG). The program provides grant funding for producers who add value to their products through processing or marketing activities, such as business planning and website development. The goals of this program are to generate new products, create and expand marketing opportunities, and increase producer income. Applicants may receive priority if they owned and operated a farm for no more than 10 years, are a socially disadvantaged farmer, or are a small- or medium-sized farm. Independent producers, agricultural producer groups, farmer cooperatives, and majority-controlled producer-based business ventures are eligible to apply for this program. For local food producers, the program can support activities such as processing and delivering local agricultural products and expanding processing capacity for local products. The program reserves funds to develop local and regional supply networks that connect small- and medium-sized farmers to markets (Martinez, 2016). Grants are awarded each fiscal year through a national competition. Rupasingha et al. (2018) found that businesses receiving a VAPG were less likely to fail than similar operations without the grant.

The 2014 Farm Bill reprioritized VAPG to better target small- and midsized family farms as well as beginning, socially disadvantaged, and veteran farmers (Low et al., 2015). Funding for the program was increased, and funds were set aside for local and regional food supply networks.

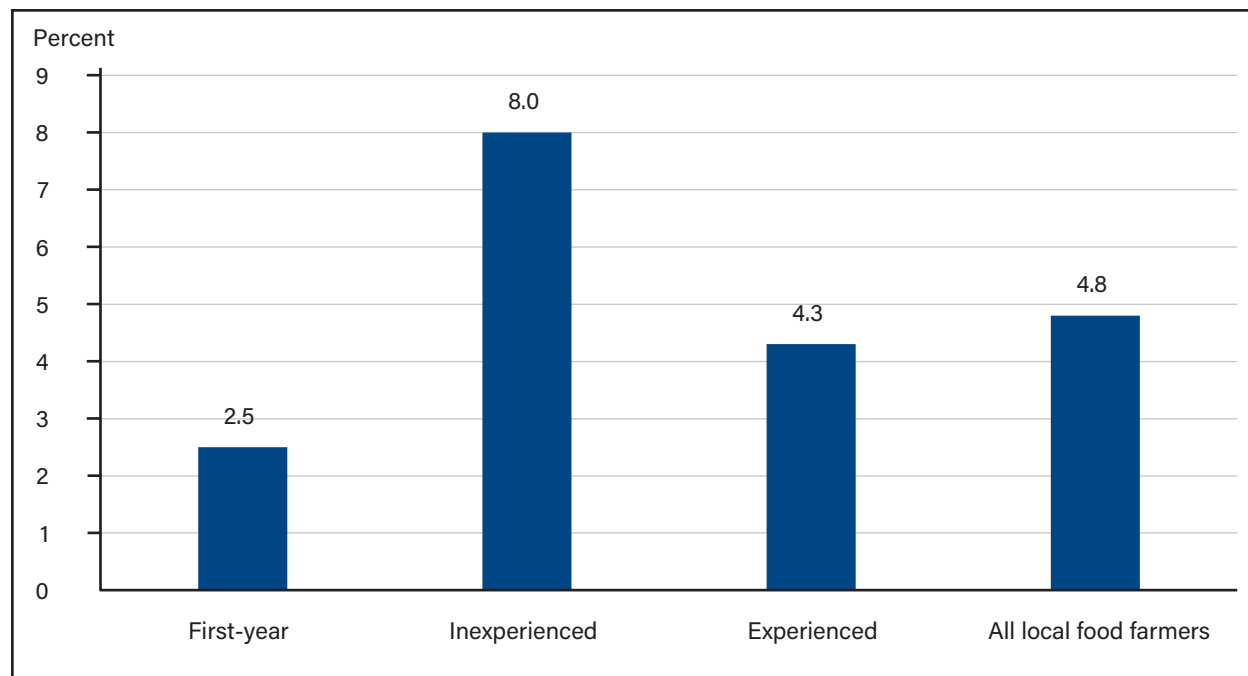
In 2015, 4.8 percent of local food producers participated in the Environmental Quality Incentives Program (EQIP), which also includes preferences for beginning farmers (figure 5). This figure compares to 1.7 percent of all farms in 2016 (Hellerstein et al., 2019). USDA's Natural Resources Conservation Service (NRCS) provides financial and technical assistance to eligible farmers to adopt conservation practices on working farmland. After developing a conservation plan through the NRCS technical assistance program, farmers complete an application indicating what land will be enrolled, resource concerns will be addressed, and what practices will be used (Hellerstein et al., 2019). Contract selections are made at the State or local level. Beginning and limited-resource farmers are eligible for an increased payment rate (Low et al., 2015). Preferences provided for newer farmers are reflected in the higher percentage of inexperienced farmers who participated in the program compared to experienced farmers (figure 5).

To access credit, 3.9 percent of local food producers received a loan from one of the USDA, Farm Service Agency's (FSA) Farm Loan Programs that offer opportunities to family-sized farmers. These temporary loans assist farmers who are unable to get credit elsewhere. Different types of loans are available, depending on the farmer's needs and situation. For example, a microloan can meet the needs of small and beginning farmers, as well as specialty crop and niche operations, by easing some requirements and reducing paperwork. Eligibility requirements differ depending on the type of loan. Eligible producers can contact USDA for information on how to apply for an FSA loan.

Only 1.1 percent of local food producers participated in the Whole-Farm Revenue Protection Program (WFRP). Administered by USDA's Risk Management Agency, WFRP provides a risk management safety net for all commodities on the farm under one insurance policy. The plan is tailored to any farm with up to \$8.5 million in insured revenue and provides protection against loss of revenue due to a natural disaster. It was developed for farms that sell directly in local or regional markets and grow specialty crops and animals. WFRP is available for purchase at local crop insurance agents if the producer satisfies eligibility criteria. It has limited availability to new and beginning farmers, depending on whether the producer has taken over 90 percent of the operation and can provide farm tax records from the previous operator.

Figure 5

Local food producers participating in the Environmental Quality Incentives Program (EQIP) by levels of farming experience, 2015



Note: See table 3 for definitions of first-year, inexperienced, and experienced farmers based on levels of farming experience.

Source: USDA, Economic Research Service compiled from the 2015 Local Food Marketing Practices Survey.

Among all local food producers, 5.7 percent—or 9,520—signed up for the Noninsured Crop Disaster Assistance Program (NAP), which compensates producers for catastrophic losses to certain crops (e.g., specialty crops) in counties where federally subsidized crop insurance is unavailable (Motamed et al., 2018). Under NAP, administered by the USDA, FSA, producers can pay a premium for catastrophic coverage to protect against natural disasters that result in crop losses or prevent planting. An eligible producer is a landowner, tenant, or sharecropper who shares the risk of producing an eligible crop and is entitled to an ownership share of that crop. Eligible producers must apply for coverage and pay the applicable service fee.

In 2015, NAP reported 137,821 active applications for covered crops, including 16,432 producers classified as limited-resource, socially disadvantaged, or beginning (Hungerford et al., 2017). Noninsured Crop Disaster Assistance Program enrollment doubled from 2014 to 2015 for beginning, socially disadvantaged, or limited-resource farmers. Under the 2014 Farm Bill, these categories of farmers became eligible for a waiver of the NAP service fee and a 50-percent premium reduction (Hungerford and Astill, 2017). Prior to the 2014 Farm Bill, only limited-resource farmers were eligible for the service fee waiver.

The premium or fee to participate in WFRP and NAP raises producer costs. If local food producers have lower margins, this could explain their decision to not participate. The share of operations participating in WFRP is also low. This relatively complex insurance coverage program is perhaps less useful to smaller operations or less profitable for crop insurance agents to process.

The timing of the survey may make it difficult to gauge whether local food producers found participation in NAP and WFRP to be useful. WFRP was new in 2015, and NAP changes that made coverage more valuable and waived the fees for beginning and socially disadvantaged farmers were also new.

Financial Performance

Net farm sales—or gross value of agricultural product sales, including government payments, minus the operation’s farm expenses paid during the year—is used to measure profitability.¹⁵ A larger value of net sales indicates more funds available to pay loans, invest in equipment and supplies, remain in production, expand operations, and provide living expenses. Off-farm income can also be important to service debt and invest in production. Low and Vogel (2011), using the 2008 ARMS, found that farm households selling local foods earned 17 percent less, on average, in off-farm labor income than farm households that did not sell local foods. A question in the 2015 LFMPs addressed whether the farm operator worked predominantly in a non-farm occupation; however, the amount of off-farm income was not included.

Seventy percent of local food producers had positive net farm sales. A larger share of first-year farmers earned positive net sales (83 percent), followed by inexperienced farmers (73 percent) and experienced farmers (70 percent) (figure 6). Internet access and using the internet to purchase farm inputs and access price and market information were associated with positive net farm sales (figure 1 and table 6). In contrast, local food producers with more direct marketing experience had a higher share of producers with positive net farm sales. This indicates producers with more direct marketing experience were more likely to have positive net farm sales. The type of experience—years involved in direct marketing versus years operating a farm—leads to different probabilities of a successful farm enterprise, at least as measured by net farm sales. However, we cannot imply any causal relationships between experience and the likelihood of positive net sales since we do not account for other factors that may affect positive net sales.

The correlations between positive net sales and direct marketing experience were strongest for entering producers and were statistically significant across all categories of marketing experience. The same pattern of statistically significant correlations existed across the farming-experience categories.

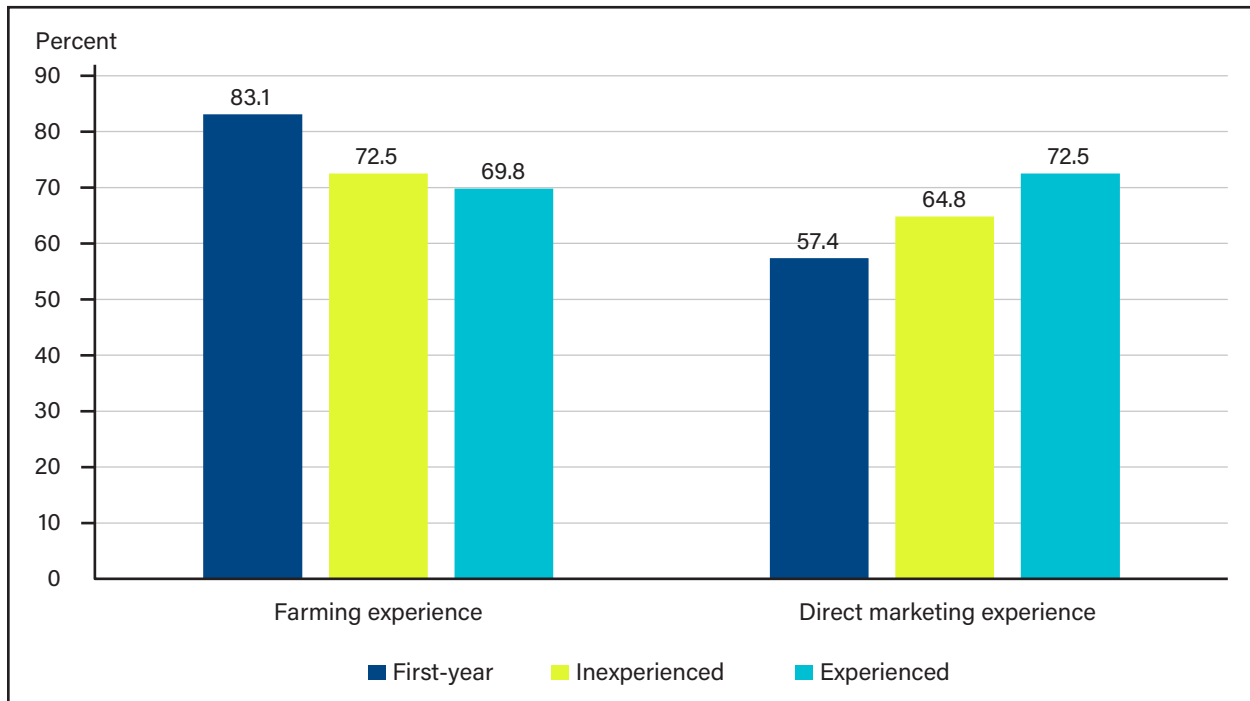
While we do not develop a comprehensive model to understand factors influencing business success, we highlight two measures related to achieving positive net farm sales. For the six measures of internet activity, we examine adoption patterns for operators reporting positive net farm sales. First-year and experienced direct marketers reported higher levels of adoption for most activities relative to their counterparts in farming experience categories (table 10). A similar pattern exists for the five measures of accessing farm management records (table 8). First-year and experienced direct marketers were more intensive users of most farm management records relative to first-year and experienced farmers. Adoption rates were slightly negatively correlated, although statistically significant, with farming experience and direct marketing experience for internet use and farm management practices.¹⁶ For farmers with positive net farm sales, the correlation between farming experience and adoption of internet activities and adoption of farm management records was -0.16 and -0.13, respectively. The correlation between direct marketing experience and adoption of internet activities and adoption of farm management records was -0.14 and -0.01, respectively.

¹⁵There are challenges in measuring net returns. See Moss et al. (2012) for a special issue of the *Agricultural Finance Review* that examined financial data provided by ARMS. The issue reviewed how ARMS is a singularly valuable source of information on the financial condition of farms and the economic well-being of farm households. ARMS is recognized to have several data limitations that make it difficult to fully and accurately measure the financial condition of a farm operation. These limitations are developed more fully in the articles in the special issue.

¹⁶Stata data organization and statistical tests were used for testing correlation coefficients (Gleason, 1996; Goldstein, 1996).

Figure 6

Share of operations with positive net farm sales by levels of experience in farming and direct marketing, 2015



Note: See table 3 for definitions of first-year, inexperienced, and experienced farmers based on levels of direct marketing and farming experience. Net farm sales are defined as total gross value of sales, including government agricultural payments, minus all farm expenses paid.

Source: USDA, Economic Research Service compiled from the 2015 Local Food Marketing Practices Survey.

Local Food Sales

Whether or not producers were financially better off in local supply chains depended on the volume of sales, the size of the price premium they received, and the degree to which they performed additional supply-chain functions cost effectively (King et al., 2010). The ratio of local food sales to total farm sales measured how farms rely on local food sales for financial viability (Low and Vogel, 2011). Local foods accounted for 76 percent of the total gross value of agricultural product sales by local food producers. In 2008, Low and Vogel (2011) found that local food sales accounted for 61 percent of total farm sales, on average, based on the 2008 Agricultural Resource Management Survey (ARMS). They also found that for two-thirds of local food farms, local foods accounted for at least 75 percent of their gross sales, consistent with our finding. Local foods accounted for a smaller share of total agricultural sales for first-year farmers and first-year direct marketers (figure 7). Local foods accounted for a higher share of experienced direct marketers' agricultural sales, followed by inexperienced direct marketers. Differences in shares were statistically significant across each experience level with one exception. For farming experience, differences in sales shares of inexperienced farmers compared to the share for experienced farmers were quite small and not statistically significant.

Table 10

Local food farmers' internet usage by years of direct marketing and farming experience for producers with positive net sales, 2015¹

Item	First-year farmers	Inexperienced farmers	Experienced farmers	All local food farmers
Farming experience				
Number of farms				
Total farms	1,084	17,004	99,353	117,441
Percent of farmers				
Purchasing items for farm	72.4	61.3	37.2	41.0
Online learning resources	9.5	47.8	23.1	26.5
Online business resources	23.0	42.3	27.9	29.9
Funding opportunities	7.9 ²	13.6	6.8 ²	7.8
USDA Market News	16.2	31.4	21.1	22.6
Other sources of price and market information	64.1	40.5	29.3	31.2
Direct marketing experience				
Number of farms				
Total farms	4,668	17,601	95,172	117,441
Percent of farms				
Purchasing items for farm	50.6	47.6	39.4	41.0
Online learning resources	41.2	31.8	24.8	26.5
Online business resources	56.9	27.2	29.1	29.9
Funding opportunities	11.7	10.0	7.2	7.8
USDA Market News	54.0	26.5	20.3	22.6
Other sources of price and market information	70.2	31.9	29.2	31.2

¹See table 3 for definitions of first-year, inexperienced, and experienced farmers based on levels of direct marketing and farming experience.

²Indicates paired differences are not statistically significant.

Source: USDA, Economic Research Service compiled from the 2015 Local Food Marketing Practices Survey.

Some farmers sold through a combination of direct marketing channels, which differ in marketing and transaction costs (Plakias et al., 2019). Only 6.4 percent of local food producers sold through all four direct marketing channels—direct-to-consumer, direct-to-retail, direct-to-institution, and direct-to-intermediate markets. Inexperienced farmers—most notably based on farming experience—had the highest share of farms selling in all channels (figure 8). Farmers with different levels of farming and direct marketing experience may prefer certain direct marketing channels over others. Farmers with 10 or fewer years of farming experience may face lower barriers to entry to the direct-to-consumer marketing channel than to other direct marketing channels with higher transaction costs (Plakias et al., 2019).

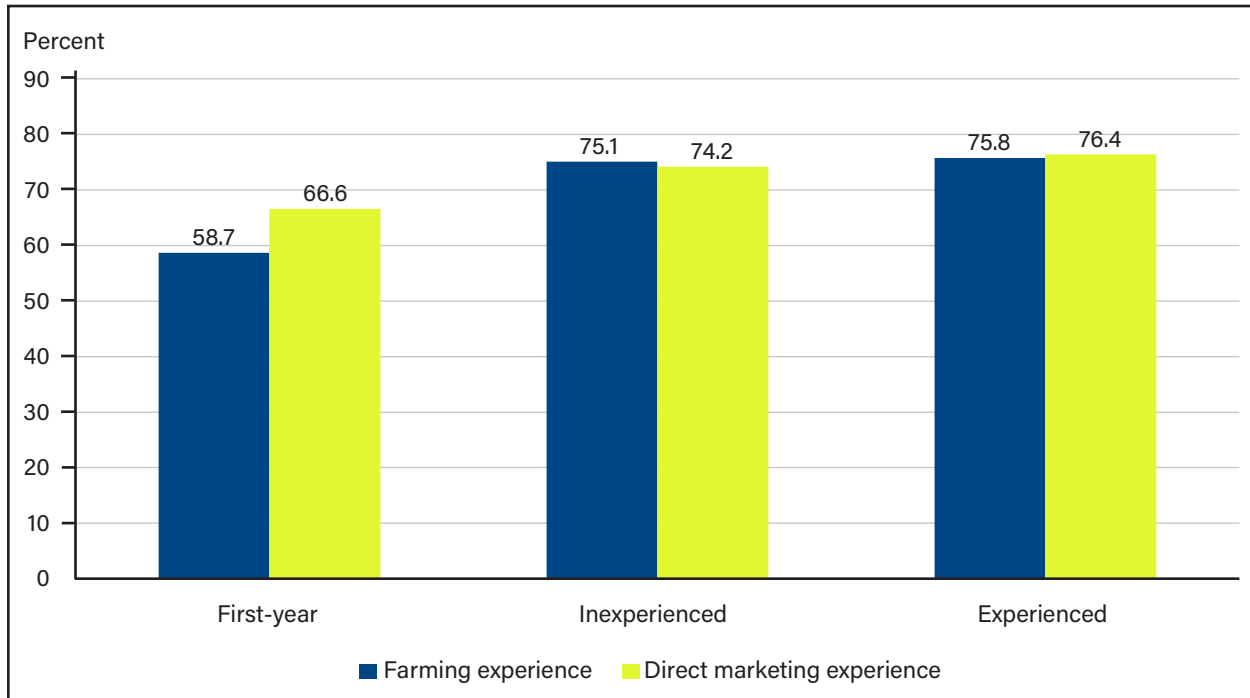
Plakias et al. (2019) found that beginning farmers—those with 10 or fewer years of farming experience—are more likely to sell directly to consumers and retailers compared to experienced farmers. They are also more likely to simultaneously sell directly to both retailers and consumers. In addition, farmers who have more experience selling directly were more likely to sell directly to intermediaries and less likely to sell directly to consumers.

Previous studies also found channel choice to be related to farm size, age of the operator, and whether farming is their primary occupation (Plakias et al., 2019).¹⁷ Low and Vogel (2011) found that large farms accounted for 93 percent of local food sales by farms that sell exclusively through intermediated channels. Larger farms may have a comparative advantage in intermediated sales because many grocery stores, restaurants, and distributors value timely delivery of large amounts of food with consistent quality.

¹⁷Although beyond the scope of this study, the 2015 Local Food Marketing Practices Survey includes information on operator characteristics and farm characteristics that can be used for subsequent studies of marketing channel choices.

Figure 7

Local food sales as a share of total gross value of sales by farming and direct marketing experience, 2015

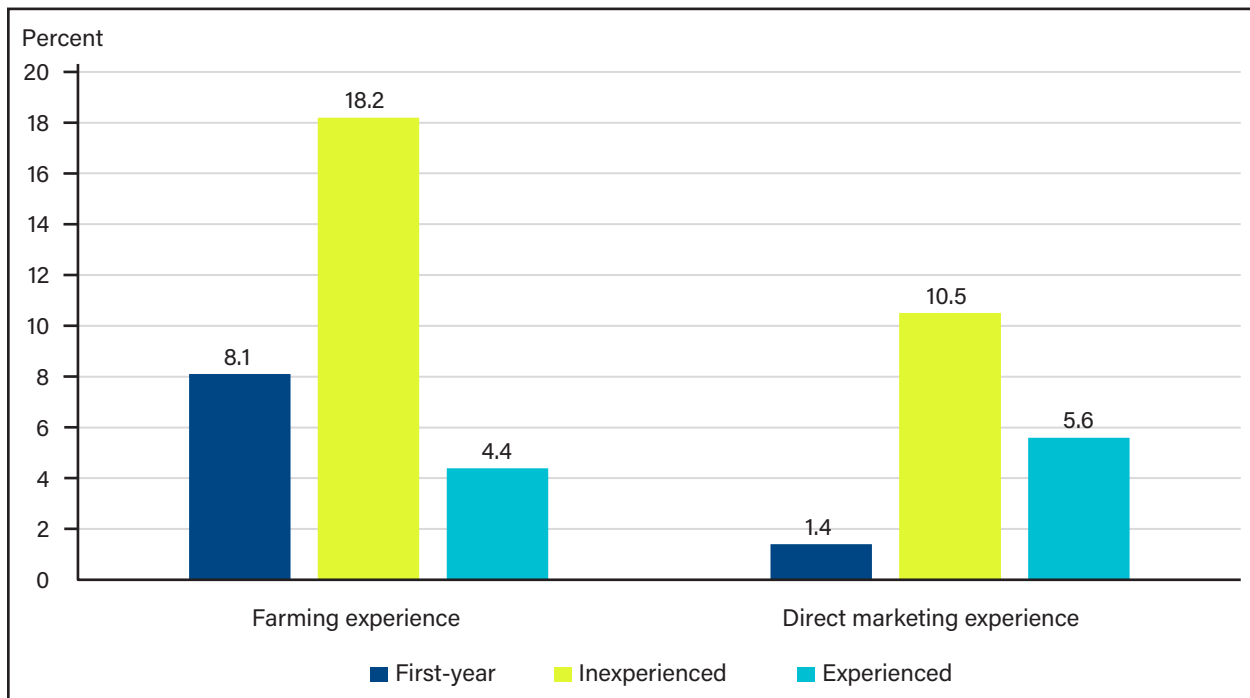


Note: See table 3 for definitions of first-year, inexperienced, and experienced farmers based on levels of direct marketing and farming experience. Total gross value of sales includes all agricultural products and government payments.

Source: USDA, Economic Research Service compiled from the 2015 Local Food Marketing Practices Survey.

Figure 8

Farms selling through all direct marketing channels by levels of farming and direct marketing experience, 2015



Note: See table 3 for definitions of first-year, inexperienced, and experienced farmers based on levels of direct marketing and farming experience.

Source: USDA, Economic Research Service compiled from the 2015 Local Food Marketing Practices Survey.

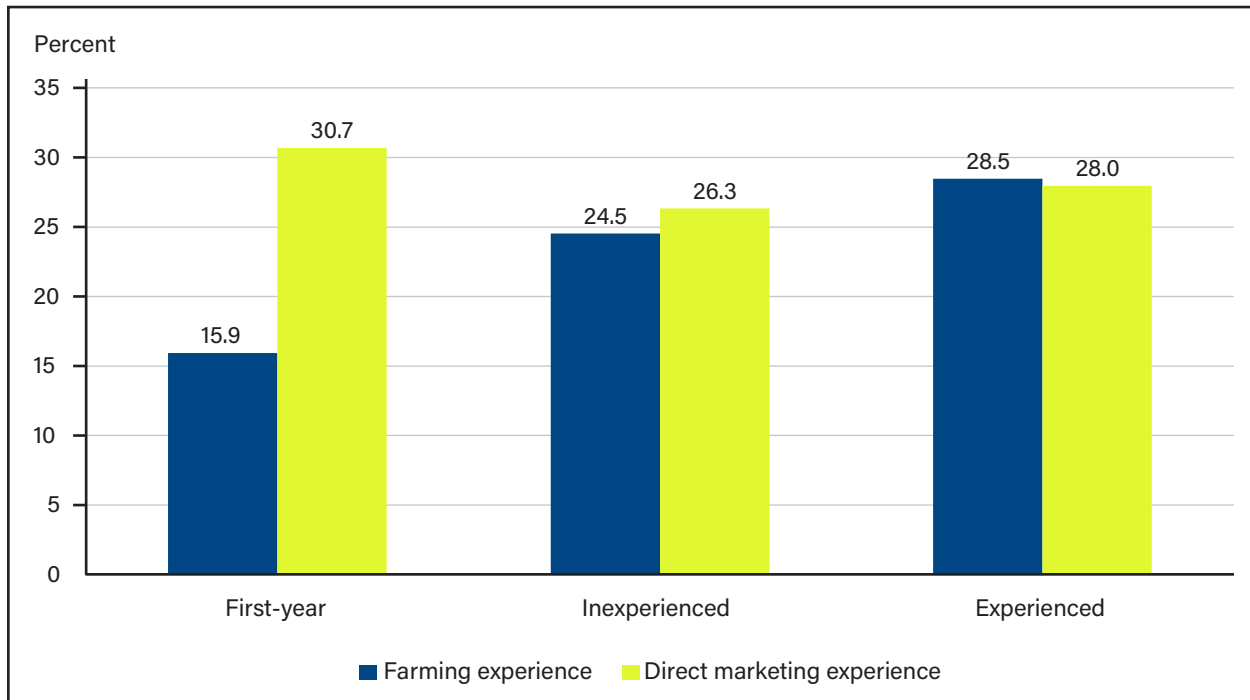
Marketing Expenses Related to Direct Sales

The 2015 LFMPS elicited information in six categories of marketing expenses paid by an operation for food produced and sold directly to consumers, a retail market, an institution, or an intermediate market. The categories include: (1) costs to transport and distribute to market channel outlets (e.g., vehicle insurance, gas, and depreciation); (2) equipment and supplies (e.g., boxes, bags, coolers, crates, scales, and tables); (3) labor hired to work at the market channel outlets; (4) market promotion and advertisements (e.g., through a website, brochures, etc.); (5) food safety expenses (e.g., compliance costs, training, and third-party auditing); and (6) all other direct marketing expenses (e.g., market fees, licenses, insurance, etc.). These expenses accounted for 28 percent of local food producers' farm expenses paid in 2015. Producers with more farming experience had higher direct marketing expenses as a share of farm expenses paid (figure 9).

Low production volume and lack of specialization in the direct and intermediated food supply chains may limit the ability to engage in low-cost and highly efficient production and distribution (King et al., 2010; Ahearn et al., 2018; Mundler and Jean-Gagnon, 2019; and Bruce, 2019). The size of supply chains may be limited by a focus on selling within a limited region and the desire to foster strong links between producers and consumers. Alternatively, organic production can be shipped anywhere in mainstream supply chains, consistent with the conventional supply chain that can benefit from economies of scale in agricultural production (Matteson and Hunt, 2012; Ahearn et al., 2018). Regulations imposing costs for low-volume enterprises—for example, food-safety operating standards—and seasonal availability may also restrict production volume (King et al., 2010). Opportunities to achieve economies of size in marketing costs may be limited because few fixed costs are involved with marketing activities (Hardesty and Leff, 2010). Economies of size are more likely observed in production activities.

Figure 9

Direct marketing expenses as a share of all farm expenses paid by levels of farming and direct marketing experience, 2015



Note: See table 3 for definitions of first-year, inexperienced, and experienced farmers based on levels of direct marketing and farming experience. Direct marketing expenses exclude production costs associated with local foods.

Source: USDA, Economic Research Service compiled from the 2015 Local Food Marketing Practices Survey.

Intermediated chains that aggregate products from several producers can realize significant economies of size in transportation and distribution as product volume increases (King et al., 2010). As demand for local food products grows in an area, intermediated chains may need to increase product volumes in order to distribute through mainstream distribution centers. Building relationships with such supply chains may increase product volumes and reduce per-unit costs as demand for local food products grows.

Transportation and distribution costs accounted for the largest share of direct marketing expenses (31 percent), followed by equipment and supplies (22 percent), all other direct marketing expenses (18 percent), and hired labor (13 percent) (table 11). Promotion and advertising accounted for 9 percent and food safety expenses for 6 percent of direct marketing expenses. This is consistent with the small percentage of local food farmers using a farm business website to provide background information (15 percent), to advertise (14 percent), and to employ a food safety plan for produce (14 percent).

Producers with the least farming experience spent over half of direct marketing expenditures on transportation and distribution expenses, by far the largest percentage across all categories, experience levels, and types (table 11). They also spent a smaller percentage on equipment, supplies, and hired labor compared to those with more farming experience.

Table 11

Local food marketing expenses by levels of direct marketing and farming experience, 2015¹

Category	First-year farmers	Inexperienced farmers	Experienced farmers	All local food farmers
Percent of total direct marketing expenses				
Farming experience				
Hired labor	8.5	13.9	13.0	13.1
Transportation and distribution	53.4	30.2	31.0	31.1
Market promotion/advertisement	12.7	10.1	9.2	9.4
Equipment and supplies	9.7	23.4	22.0	22.1
Food safety	5.2 ³	4.7 ³	6.4	6.2
Other marketing expenses ²	10.5	17.6	18.3	18.2
Direct marketing experience				
Hired labor	17.4	12.5	13.0	13.1
Transportation and distribution	24.3	29.3	31.9	31.1
Market promotion/advertisement	9.5 ^{3,4}	10.0 ³	9.2 ⁴	9.4
Equipment and supplies	24.7	21.4	22.1	22.1
Food safety	7.4	5.7	6.2	6.2
Other marketing expenses ²	16.8	21.1	17.5	18.2

¹See table 3 for definitions of first-year, inexperienced, and experienced farmers based on levels of direct marketing and farming experience.

²Includes market fees, licenses, insurance, etc.

^{3,4}Indicates paired differences are not statistically significant.

Source: USDA, Economic Research Service compiled from the 2015 Local Food Marketing Practices Survey.

Transportation and distribution accounted for a larger share of experienced direct marketers' expenses (32 percent), followed by inexperienced (29 percent) and first-year direct marketers (24 percent). First-year direct marketers spent the largest percentage on hired labor, equipment, and supplies compared to more experienced direct marketers and more than first-year farmers. This may have contributed to relatively high direct marketing expenses as a share of total expenses (figure 9). First-year direct marketers may lower labor costs by selling local foods through intermediated outlets since farmers are not required to spend time at those outlets (Low and Vogel, 2011). Expenditure shares for inexperienced and experienced farmers and direct marketers were similar across most expenditure categories.

Conclusions and Implications

Local food producers and their operations differ in several ways compared to the overall farm population. They are less likely to be beginning farmers and more likely to be female, minority, and over 65 years of age. They also tend to operate smaller farms. Local food producers are more likely located in the West and Atlantic regions compared to all farmers, and they are less likely to operate in the Plains. Additionally, the share of local food producers growing and selling fruits and vegetables is much higher than the overall farm population, although the percentage producing and selling cattle is smaller. These differences between fruits and vegetables produced are even greater when comparing all beginning farmers to beginning local food producers.

Beginning local food producers are also more likely to be over 65 years of age than all beginning farmers. Older individuals may more easily enter farming by producing local foods as they learn about production techniques and market opportunities, compared to older individuals who do not produce local foods.

Local food systems are part of Federal, State, and local government policy discussions due to the potential of local food systems to support rural communities, beginning farmers, and small-scale farmers. Local and regional food systems provide significant income for many farmers. They may be especially beneficial to beginning farmers by requiring low start-up capital, low overhead, and a relatively small land base. Local food producers with less farming experience have a higher share of producers earning positive net farm sales.

Few local food producers in the survey had a food safety plan covering produce and a third-party produce safety audit. Food hubs may be especially beneficial to beginning local food farmers by providing food safety training. As extension educators work with food hub start-ups, they can improve the feasibility of food hub planning efforts in maintaining a reliable and safe food supply demanded by retailers and institutions. Through their local extension agents, land-grant colleges and universities offer resources and non-formal education to assist farmers, small business owners, and consumers.

Local food producers' participation in USDA programs was low. The reasons for this may have little to do with the characteristics captured in the survey. Many of these programs were quite new or modified since the survey to better meet the needs of local food producers/beginning farmers. For example, the Local Agriculture Market Program (LAMP), created in the 2018 Farm Bill, includes the Farmers' Market and Local Food Promotion Program, Regional Food System Partnership grants, and Value-Added Producer Grant program (O'Hara and Lin, 2019). Program objectives include supporting the development of local and regional food systems through business planning, feasibility studies, and public-private partnerships. Survey results provide strong support for a follow-up survey to better measure the value of these and other program efforts and highlight the reasons modifications were made to USDA programs for local food producers and beginning farmers. Producers, who use different marketing approaches as direct marketing experience levels vary compared to different farm experience levels, provide useful information for developing effective marketing assistance programs and in designing future surveys.

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Appendix: Survey Methodology

The 2015 Local Food Marketing Practices Survey (LFMPS) was designed to collect data related to the marketing of foods directly from farmers to consumers, retailers, institutions, and intermediate markets, which then sell directly to consumers. The primary purpose of the survey was to produce benchmark statistical data on the number of operations that sell using direct marketing channels, the value of these foods sales, and the marketing practices used. The survey was administered in all 50 States.

Producers selected to participate in the 2015 LFMPS were identified through USDA's National Agricultural Statistics Service (NASS) List Frame and an independent list derived from public web sources. The survey sampling frame was comprised of two independent frames to enable a measure of coverage. The NASS List Frame included all farms on the list frame and entities on the list frame that were identified as potentially being in the target population. The second frame was produced by the Multi-Agency Collaboration Environment (MACE). The MACE Local Food Marketing Practices Survey sampling frame comprised potential local food operations collected from public information on the web. The MACE list was used to measure NASS's List Frame under coverage.

All farms and potential farms on NASS's List Frame and the MACE sampling frame were eligible for sampling. Farms were stratified into one of the following groups: (1) farms in the target population that had a local food marketing practice sales measure of size; (2) farms in the target population that did not have a local food marketing practice sales measure of size; (3) entities in the target population that did not have a local food marketing practice sales measure of size (not part of groups 1 or 2); and (4) all other farms (not part of groups 1, 2, or 3). Records in group 1 were stratified by State and local food marketing practice sales. Records in group 4 were stratified by State and the likelihood to engage in local foods marketing practices. Groups 2 and 3 and MACE records were stratified by State. After the NASS and MACE samples were selected, U.S. sample size, after adjusting for an expected 70 percent response rate, totaled 44,272. Surveys were sent to 24,907 farms from the NASS list with a response rate of nearly 58 percent. Another 19,365 operations from MACE were surveyed, with a response rate of nearly 52 percent.

A paper questionnaire was considered the master; web and telephone interview instruments modeled the paper instrument. A NASS survey methodologist conducted cognitive interviews before finalizing the questionnaire, and all data collection instruments were tested prior to the start of actual data collection. Respondents received a pre-survey postcard in March 2016. NASS mailed the questionnaire to the 44,272 producers, along with a cover letter and instructions for web reporting in early April 2016. Respondents who did not return their survey by the end of May 2016 were sent a follow-up mailing. In June 2016, NASS began face-to-face and telephone enumeration for remaining non-respondents. Data collection concluded in August 2016. Most data were collected by mail (42 percent), followed by phone (39 percent), face-to-face (13 percent), and internet (6 percent) responses.

NASS reviewed reported data to determine the validity and representative quality of completed questionnaires, then summarized the data to produce final estimates. Estimates were adjusted for nonresponse, misclassification—inadvertent erroneous data reporting by the respondent, and coverage—incomplete sampling frame due to continuous entry, and exit of operations from the farming business. The weighted sample size represented by the survey is 167,009 farms. Results were published on December 20, 2016.