

GROWING RESILIENCE AND INDEPENDENCE THROUGH WYOMING'S LOCAL FOOD SYSTEM

Anders Van Sandt, PhD

Assistant Professor & Community Vitality and Health Extension Specialist
Department of Agricultural and Applied Economics, University of Wyoming



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Figure 1. A Balanced Food System



Executive Summary

Local food systems provide critical redundancies to the national food supply chain, which has become more concentrated and prone to bottlenecks. In addition to local foods systems' shorter and more nimble supply chains, they are better able to cater to Wyomingites' values, tastes, and preferences. Wyoming's local food system has been growing but faces unique challenges, including high transportation costs, lack of secondary markets for animal processing byproducts, and a lack of food system infrastructure like cold storage, contract packagers, and a state brand that informs consumers of Wyoming-made products. Still, Wyomingites' enthusiasm for ingenuity and self-determination has sparked multiple opportunities and initiatives led by the industry, state, and institutions. It is estimated that Wyoming's local food sector currently contributes \$24.4 million to Wyoming's economy. If Wyomingites spent just 5% of their food-at-home budget on local foods, we could expect the local food system to contribute an additional \$36.3 million to Wyoming's state GDP,¹ after accounting for reduced purchases at conventional

grocery stores. This study shows how investing in Wyoming's local food system not only supports our agricultural industry and communities, but also stimulates economic growth by reducing the state's reliance on imported foods with long supply chains.

Wyoming's Local Foods System

What does "local" mean?

Defining local food systems can be challenging because interpretations of the term "local" vary widely. Local food systems are diverse and definitions may change across space, consumers, and time. For some, local foods may be best defined as foods produced within a certain radius (e.g., 100 miles), or within a political boundary (e.g., within a county or state). For others, local food systems are better characterized by values such as greater localized economic control, improved environmental

¹ Wyoming's GDP, or Gross Domestic Product, is the total value of all final goods and services produced in Wyoming in a year. GDP can also be thought of "value-added" since the final value is the sum of the value added to a product at each point along the supply chain rather than the sum of total values at each point, which would lead to double counting.

conservation, or shorter and more nimble supply chains. For these reasons, it may be best to interpret our food system's structure as a continuum where "local food systems" refer to one end of the spectrum and are characterized by a mix of production proximity and products that reflect local community values and preferences.

Why are local food systems important?

As the United States' food system continues to become more concentrated, comprising fewer yet larger producers, processors, and distributors, it has become brittle and susceptible to supply chain failures. Figure 2 shows how the number of farms in the U.S. decreased by approximately 5 million while the average farm size more than doubled over the past 100 years. The economies of scale sought by industry leaders can improve food affordability; however, the resulting bottlenecks in our food system became painfully apparent during the COVID-19 pandemic. For example, the closures of meat processors in 2020 due to rising employee

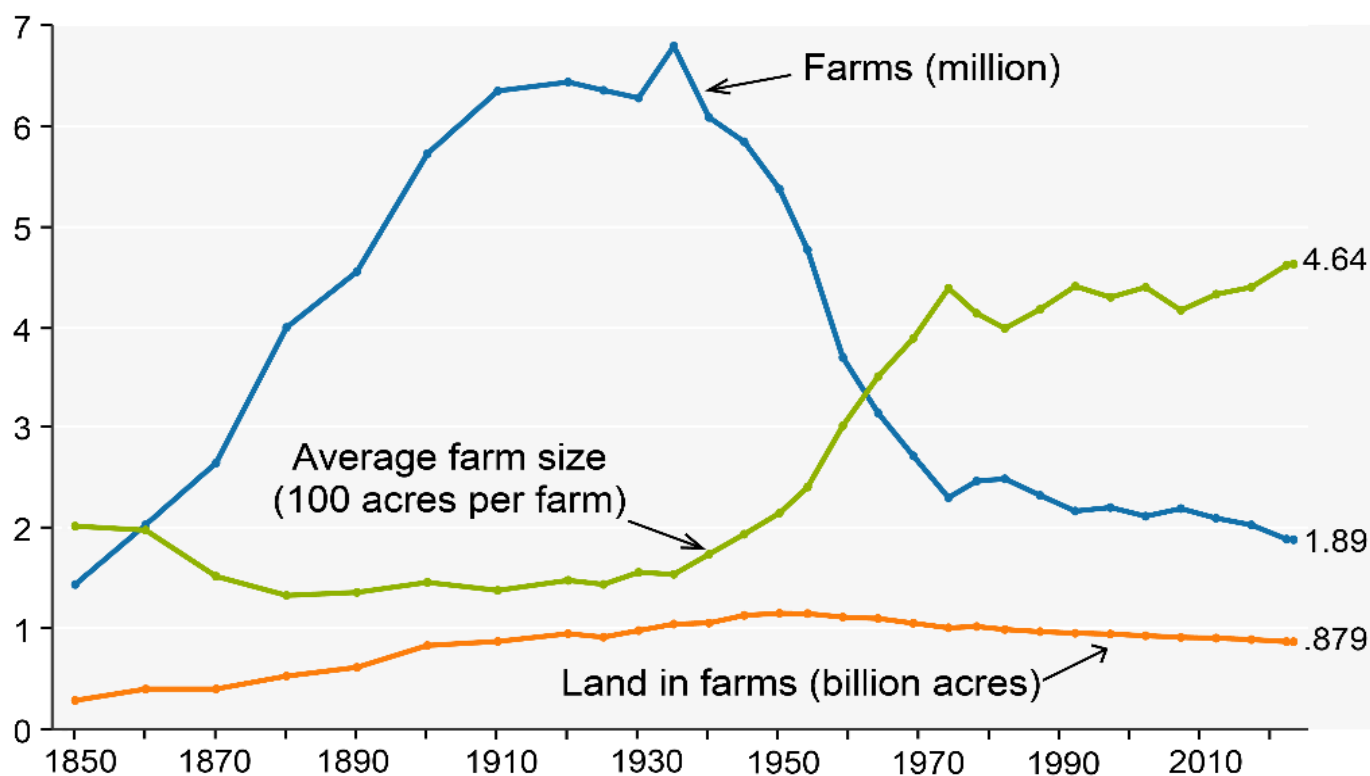
infections likely played a large role in cattle prices plummeting and ground beef prices skyrocketing, which hurt both producers and consumers alike. Regional and local food systems provide critical redundancies in our food supply chains and can improve a community's food resilience. A more resilient food system is one in which the large-scale global and U.S. food systems are not replaced, but instead overlaid with a web of smaller-scale regional and local food systems.

While local foods are often perceived as being more expensive than their conventional or imported counterparts, evidence suggests Wyoming consumers are willing to pay this premium. Figure 3 shows the relative importance of different values to Wyoming consumers, based on a 2023 survey of farmers' market shoppers across three Wyoming counties.¹ In addition to meeting the demand of value-based consumers, local food systems are better positioned to cater to local tastes and preferences, thereby providing a greater variety of foods and access to unique, culturally important foods.

Oftentimes, local foods are purchased through markets other than conventional grocery stores. The two primary markets observed by the USDA are direct-to-consumer and direct-to-retailer

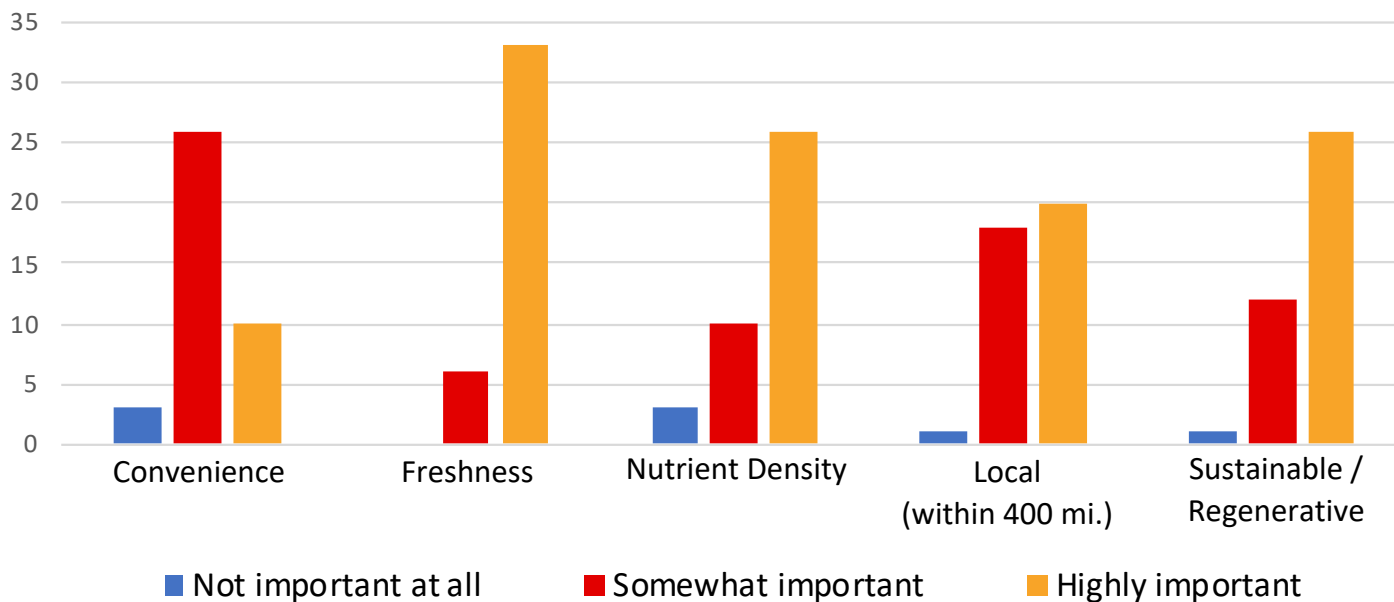
Figure 2. Farms, land in farms, and average acres per farm, 1850–2023

Million farms, billion acres, or 100 acres per farm



Source: USDA, Economic Research Service using data from USDA, National Agricultural Statistics Service, Census of Agriculture (through 2022) and *Farms and Land in Farms: 2023 Summary* (February 2024).

Figure 3. How important are the following for the foods that you eat?



markets. Direct-to-consumer markets include food sales through farmers’ markets, farm stands, or herd shares, to name a few. Direct-to-retailer markets include examples such as farm-to-school programs, farm-to-table restaurants, and other market segments that bypass wholesalers. Other local foods market types include local food hubs in which local foods are aggregated and shipped together in order to reduce transportation costs. Using regional business models like food hubs or contract packagers (businesses that process and package many different labels) enables small producers to benefit from economies of scale on distribution costs.

In addition to creating more resilient food supply chains and providing food characteristics and practices that align with

locals’ values, evidence suggests that local food systems lead to greater economic benefits for local communities. The primary reason is that revenues from local food expenditures stay in the community rather than leaking out to out-of-state corporations. However, there are also more nuanced reasons for local foods’ greater economic contributions to their communities. For example, new evidence suggests that local food businesses tend to be more labor intensive, resulting in more job opportunities.ⁱⁱ The last section of this bulletin takes a closer look at how local foods sales are impacting Wyoming’s economy.

Trends in Wyoming’s Local Food System

Data from the USDA’s Census of Agriculture on local foods marketing channels only became available in 2017, but we can still glean short-term trends from two agricultural censuses (2017 and 2022). Table 1 displays two measures of local food sales, direct-to-consumer sales (e.g., farmers’ markets, farm stands, etc.) and direct-to-retailer sales (e.g., farm-to-fork or farm-to-school programs, etc.). These sales and farm counts represent a conservative measure of total economic activity related to local food systems since there are many other local food manufacturing businesses in Wyoming not tied to a farm or ranch and thus not tracked by the USDA.

Wyoming Food System Services

There are only a few local food hubs in Wyoming and very few, if any, contract packagers (i.e., co-packers). Finding ways to expand or establish these service providers would create more economic opportunities in Wyoming, particularly for smaller family-operated farms, ranches, and food businesses.

- Fresh Foods Wyoming/Eat Wyoming
- Slow Foods in the Tetons
- Slow Food Wind River

Table 1. Wyoming's Direct-to-Consumer (DTC) and Direct-to-Retailer (DTR) Statistics

	2017	2022	% Change
DTC Sales	\$3,510,000	\$4,732,000	35%
DTC Farms	569	491	-14%
DTC Avg. Rev./Farm	\$6,169	\$9,638	56%
DTR Sales	\$18,548,000	\$23,033,000	24%
DTR Farms	80	175	119%
DTR Avg. Rev./Farm	\$231,847	\$131,618	-43%

Source: 2022 Census of Agriculture, U.S. Department of Agricultureⁱⁱⁱ

Between 2017 and 2022, total DTC and DTR sales in Wyoming increased 26%, with DTC sales growing 35% and DTR sales growing 24%. While fewer farms were selling DTC in 2022, the number of farms selling DTR increased 119%. This may be a result of agricultural businesses finding the economics of selling DTR to be more favorable, given Wyoming's small market sizes and high transportation costs. In other words, a local food business's transaction costs may be lower for a few larger DTR contracts than for many smaller DTC sales. However, despite the increase in DTR sales, the large increase in DTR farms means that the average revenue per farm decreased, indicating a disproportionate growth in smaller DTR contracts. Comparatively, the average farm revenue for DTC farms increased 56% between 2017 and 2022.

Developing Wyoming's Local Food System

In 2023, the Wyoming Department of Family Services (WDFS) partnered with NourishedRx to complete an assessment of Wyoming's food system.^{iv} While the specific focus revolved around improving food banks and food security more generally, many of the themes revealed the state of Wyoming's local food system at large. Despite Wyomingites' strong independent and self-sufficient spirit, the rurality and distances between places pose large challenges for an economically viable local food system. Wyoming's rurality means that producers must reach multiple markets in order to achieve a high enough volume of sales. However, the long distances between those markets implies high transportation costs that can be prohibitively expensive for a single producer. Similarly, the large distances between communities can act as barriers. This leads to individual, and uncoordinated efforts, to develop food system services across the state.

Other groups, such as the USDA Northwest and Rocky Mountain Regional Food Business Center and the Wyoming Food Coalition, have suggested tackling these issues through public and private

Actions to Strengthen Wyoming's Local Food System

Investments:

- Aggregation and distribution centers
- Contract packaging (co-packer) plant
- Network of cold storage facilities

Policy Changes/Initiatives:

- Meat processor waste disposal
- A state "local foods brand" (e.g., Wyoming Table) to better inform consumers of local products

Source: Wyoming Food Systems Assessment, 2024

Challenges Affecting Wyoming's Local Food System

- Organizational capacity limitations across sectors (i.e., staffing, ability to coordinate with others in the food system)
- Parallel programming and the need for a coordinating body and vision
- General food transportation challenges
- Producer/market connection challenges

Source: Wyoming Food Systems Assessment, 2024

investments, partnerships, and policy changes. For example, investments in aggregation and distribution food hubs in Wyoming regions, such as the Bighorn Basin, would allow multiple small producers to load their products on the same truck to reduce transportation costs. Similarly, a network of cold storage facilities could enable local producers to store products for a longer amount of time before distribution. Finally, waste disposal costs have become debilitating for many of Wyoming's meat processors. Addressing these issues may require creative solutions, such as composting or attracting edible and/or nonedible rendering plants to convert processing waste into secondary products such as tallow, bone meal, and even pet food.

Wyoming opportunities

The global COVID-19 pandemic forced consumers and policymakers to observe the strain on our food system. Since then, multiple investments have been made in Wyoming's local food system. Initially, these investments were specific to the meat-processing industry through the **Meat Processing Expansion Grant Program**. This program, funded by CARES Act dollars, distributed \$4.8 million to 29 applicants for infrastructure expansion and equipment purchases to increase Wyoming's meat-processing capacity.^v If these meat processor investments are successful, it will translate to not only more locally raised meat available in our communities, but a greater share of consumers' food budget staying in Wyoming rather than leaking out of the state's economy.

The Meat Processing Expansion Grant Program was an expedited program to address economic stress created by a public health emergency. The Wyoming Department of Family Services also budgeted nearly \$2.4 million in pandemic-era American Rescue Plan Act (ARPA) funds to support forward contracts, aggregation and distribution, and food system coordination projects. Beyond these pandemic-era funds, there have been other significant investments in Wyoming's local food systems. The USDA **Resilient Food System Infrastructure** (RFSI) grant program, launched in September 2024, will provide \$1.8 million in funding for food businesses to build infrastructure or purchase equipment that can bolster the “middle” of Wyoming's local food system.^{vi} Specifically, these grants will fund projects that improve storage, distribution, and processing for Wyoming food products. If these investments are successful, they could increase market access for Wyoming small businesses and lower transaction costs by decreasing the effect of common barriers to food business growth (e.g., distance to market).

To cap off recent investments in Wyoming's local food system, the USDA **Northwest & Rocky Mountain Regional Food Business Center** (NWRM-RFBC) aims to coordinate projects and initiatives within the state and across the center's six-state region.² While there are other RFBCs across the U.S., the NWRM-RFBC's four primary objectives are to 1) scale food entrepreneurs, 2) invest in right-sized infrastructure, 3) strengthen animal-processing supply chains, and 4) diversify markets for climate-resilient food products. In addition to collaborations with state partners, including private businesses, the Wyoming Business Council, University of Wyoming Extension, and the Wyoming Food Coalition, Wyoming's team within this center will develop a no-cost marketing course and allocate \$500,000 in funding to small food businesses in Wyoming. Other goals of the Wyoming team include establishing a state local foods brand (e.g., “Idaho Preferred” or “Colorado Proud”) and reducing market barriers for food business growth, particularly for underinvested populations.

These three initiatives are all occurring under the context of Wyoming's cottage food laws, which are arguably the most liberal in the country. The Wyoming Food Freedom Act enables the sale of homemade goods without inspection and with minimal labeling requirements. The Food Freedom Act was first passed by the state legislature in 2015 and has been amended four times to date, with each amendment enhancing or expanding the original bill's scope. While there are some concerns regarding adherence to food safety best practices, this legislation increases the economic opportunities for Wyoming communities by reducing the costs and barriers to becoming a food business entrepreneur. The act supports family or individually owned food businesses to start up and perfect their recipes and business model before they invest in, and scale up to, a commercial kitchen facility. New “food freedom markets,” where small-scale food businesses can sell their products on consignment, have been popping up across Wyoming. One example, Meadowlark Market & Kitchen in Lander, combines a food freedom consignment market with a “shared kitchen” in the back that supports food businesses with limited resources looking to expand from consignment to retail markets.

Shared Kitchen

Also known as a commissary kitchen, a shared kitchen can act as a business incubator where space is rented out to multiple food businesses. This model can make the transition from a home kitchen to a commercial kitchen more affordable for many small businesses.

Where we draw strength

Despite the challenges, Wyomingites' grit, ingenuity, and self-determination have sowed the seeds for a stronger and more flexible food system. In addition to laws like the Food Freedom Act, statewide initiatives like First Lady Gordon's **Wyoming Hunger Initiative** are making positive changes in our local food systems. The Wyoming Hunger Initiative's primary goal is to eradicate hunger in Wyoming by supporting long-term and sustainable solutions.^{vii} The initiative's programs include a broad coalition of partners, including farmers, ranchers, hunters, processors, and institutions, to bring Wyoming-produced meat and produce to communities facing food insecurity. While the initiative's primary goal revolves around food insecurity specifically, the investments and partnerships made by the First Lady's initiative support and strengthen our local food supply chains more broadly. This initiative is one example of how government can lead through industry partnerships to influence positive community development.

As much as we hear about our rurality being a challenge, it is also one of Wyoming's greatest strengths. The adage “Wyoming is one small town with long streets” still rings true and highlights the strength we can draw from our community

2 The Northwest Rocky Mountain and Regional Food Business Center is led by Colorado State University and Oregon State University and draws from state teams across six states: Colorado, Idaho, Montana, Oregon, Washington, and Wyoming. Center website: <https://nwrockymountainregionalfoodbusiness.com>

Table 2. Current Economic Contribution of Wyoming's Local Food Sector

	Total output	Labor income	Employment	Value-added
Direct Contribution	\$27,765,000	\$8,069,119	190	\$16,089,493
Indirect and Induced Contribution	\$16,938,109	\$4,552,984	101	\$ 8,314,180
Total Contribution	\$44,703,109	\$12,622,103	291	\$24,403,673
Multiplier	1.61	1.56	1.53	1.52

connections. Transportation costs will not decrease on their own, but our ability to connect and coordinate is easier given most of us know each other within a couple degrees of separation. While transportation costs might be high, the costs of organization and coordination in Wyoming are likely lower compared to more populated states.

Our state's broad support for cattle ranching, hunting, and meat processing is one example of leveraging these connections. The University of Wyoming Extension's 4-H program connects young people to agriculture and hones their skills in raising livestock, among a broad set of other important life skills. With funding support from the State Legislature, the UW College of Agriculture, Life Sciences and Natural Resources has begun a new undergraduate program in ranch management and agricultural leadership to instill students with the knowledge and skills to grow Wyoming's ranch businesses now and into the future. While Wyoming still faces many challenges in creating a more resilient local food system, the initiatives, inherent strengths, and opportunities outlined in this section illustrate the potential tailwinds bolstering Wyoming's local food movement.

The Economic Contribution of Wyoming's Local Food Sector

This section estimates the economic contribution of Wyoming's local food sector to the state's economy, then forecasts how an

Understanding Economic Effects

Direct: Total value of initial spending.

Indirect: Change in business-to-business purchases. As production increases, more inputs like animal feed, seeds, and labor are needed.

Induced: As more labor is hired to keep up with increased production, this new labor spends their income on household goods and services.

increase in local food purchases may impact Wyoming's economy. This exercise showcases how growth in the local foods sector may influence existing industries and households' wealth. While local food sales may include products made by local food businesses beyond the farm gate and products made with ingredients not produced in Wyoming, we only consider direct sales to consumers and retailers from Wyoming farms and ranches due to data limitations.³

These estimates were calculated using data from IMPLAN, an economic modeling software, and the USDA's 2022 Census of Agriculture. Results show direct effects as well as indirect and induced effects. The direct effect is the economic contributions directly

from the initial sale of local food products. The indirect effect measures the economic contributions created from businesses purchasing inputs through the supply chain. The induced effect measures the economic contributions created from increased household expenditures as businesses hire more labor.

Wyoming's local food economy generates nearly \$28 million in output each year and directly supports 190 jobs, with annual incomes of approximately \$42,000 on average. While this is the direct contribution of Wyoming's local food sector, there are also indirect effects from businesses purchasing more inputs through the supply chain, and induced effects from households spending new income. These secondary and tertiary effects lead to an additional \$17 million in output and 101 more jobs

³ Current direct-to-consumer and direct-to-retailer activity is displayed in Table 1 of this bulletin.

Table 3. Net Economic Impact if Wyoming Households Spent 5% of Food-at-Home Budget on Local Foods

	Total output	Labor income	Employment	Value-added	Labor income per job
Direct Contribution	\$66,544,400	\$16,382,884	395	\$38,790,157	\$41,470
Indirect and Induced Contribution	\$45,547,549	\$12,121,052	276	\$21,944,765	\$43,935
Total Contribution	\$112,091,949	\$28,503,935	671	\$60,734,922	\$42,484
Multiplier	1.68	1.74	1.70	1.57	

that earn approximately \$45,000 per year. Compared to the 190 local foods jobs, these jobs earn slightly higher incomes on average, likely due to the types of industries they are in (e.g., transportation, manufacturing, mining, etc.). However, as noted earlier, new evidence suggests that local food producers pay significantly higher average wages and spend a higher share of total expenses on labor compared to producers who do not engage in direct or intermediate sales.ⁱⁱ Summing all effects, the total contribution of Wyoming's current local food sector generates \$44.7 million in output each year, contributes \$24.4 million to Wyoming's GDP, and supports 291 jobs.

What if Wyomingites spent 5% of their food budget on local foods?

Some states have marketing programs encouraging consumers to purchase a share of their food from local sources. For example, North Carolina's 10% Campaign encourages consumers to spend 10% of their annual food budget on locally sourced food. Table 3 shows the economic impact if Wyoming households spent just 5% of their food-at-home budget on local foods. This implies purchasing less at traditional food stores; thus, we subtract out these grocery store purchases to calculate the net effect. The reasons for the resulting high impacts are nuanced, but center on the fact that a higher share of local food purchases means less money leaking out of the state economy.

If Wyoming households were to spend 5% of their food-at-home budget on Wyoming local foods, we could expect Wyoming's GDP (value-added) to increase by \$36.3 million annually (forecasted impact less current contribution). This shift in purchasing patterns would also support 671 jobs per year, most of which will likely exist in rural communities, given the nature of the industry. While incomes for support industries are slightly

higher than those in local foods production, the annual average income for all jobs is \$42,484. The shorter supply chains of local food businesses are evident by the relatively high multipliers. For example, if employment in local food production increases by 10 jobs, an additional 7 jobs are added to the local economy due to increased demand for industry inputs and new household demand for goods and services. For longer national supply chains, these upstream jobs are more likely to reside outside Wyoming.

Achieving these impacts would amount to Wyoming local food sales increasing almost 2.4 times their current level, which is no small feat but certainly achievable considering that only about 5% of Wyoming farms and ranches currently participate in DTC or DTR markets.ⁱⁱⁱ It is also important to understand that this economic growth is centered in Wyoming's food-producing communities, who are most in need of new economic development strategies. In short, rather than spending time and money on attracting new industries to rural places, significant economic development can be achieved in rural Wyoming by promoting and investing in Wyoming's oldest industry: agriculture.

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