

Factors Driving Local Food Sales in the Northwest & Rocky Mountain Region

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Section 1: A key outcome of interest in the Northwest & Rocky Mountain (NWRM) region is "Supporting Right-Size Investing and Infrastructure". This outcome seeks to address gaps in the understanding of needs between funders and small to mid-sized producers. Specifically, the NWRM RBC hopes to identify which types of investment encourage development of the region's food systems in order to propose well-researched investments to funders. To that end, the goal of this visualization is to improve access to capital in the NWRM region by identifying factors that contribute to the development of local food systems, and where opportunity exists for counties of various rurality levels. To achieve this, we focus on the following indicators:

1. ****Local Food Sales in All Counties of the NWRM Region****: Indicates the economic activity and performance of food businesses within the region; a measure of local food system development.
2. ****Estimators of Local Sales in the NWRM Region****: Identifies key factors driving local sales, guiding effective investments. County-level variables include: the number of local food sellers, the count of meat processing institutions (MPI), and the rural/urban dimension of the county.
3. ****Producer Equity and Food Access Indicators in the NWRM Region****: Includes the number of BIPOC producers per county and the percentage of the population with low food access, ensuring investments promote inclusivity and accessibility.

Section 2: We chose the "Supporting Right-Size Investing and Infrastructure" outcome, because it has been identified as a high priority issue on the regional business center's (RBC) website and seemed feasible to investigate given the data available to us. We then selected the three indicators for their relevance, based on economic theory, and their granularity. Our region is made up of states with diverse local economies, including: large metropolitan areas, suburbs, tourist economies, and rural areas. So, we hoped to investigate factors driving local food system development at a county level. For our indicator of local food system development, we chose "Local Food Sales in All Counties", as it provides a measure of the economic health and performance of food businesses in a county. Then, we selected "Estimators of Local Sales" indicators by choosing variables that we believed would both capture investment opportunities that could drive growth and the diversity of local economies in the region. The inclusion of MPI counts, as mentioned in Section 1, was inspired by the NWRM region's website which identifies meat supply chain capacity as a high priority issue. Lastly, we wanted to include the two aforementioned "Producer Equity and Food Access Indicators" to ensure that investments promote inclusivity of food system participation and access to food, an effort that is aligned with [USDA's commitment to increasing equity](#).

Section 3: Our data visualization includes three key categories: a map of local food sales in all counties of the NWRM Region, density plots of local food sales' estimators across RUCA Codes, and a correlation plot of the population % experiencing low access and local sales. These visualizations, along with regression analysis of factors associated with the high local food sales, collectively provide a comprehensive view of the local food system's economic performance, opportunities to grow local sales, and equity/access metrics.