



Wisconsin  
Evaluation  
Collaborative

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# Local Food for Schools Evaluation

*for the Wisconsin Department of Public Instruction*



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# Report Information

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## About the Wisconsin Evaluation Collaborative

The Wisconsin Evaluation Collaborative (WEC) is housed at the Wisconsin Center for Education Research at the University of Wisconsin-Madison. WEC's team of evaluators supports youth-serving organizations and initiatives through culturally responsive and rigorous program evaluation. Learn more at <http://www.wec.wceruw.org>.

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# Introduction

The Wisconsin Local Food for Schools (LFS) Program, administered by the Wisconsin Department of Public Instruction (DPI), was designed to provide funding to purchase local, unprocessed and minimally processed food to help with the challenges of supply chain disruptions. In 2022, the U.S. Department of Agriculture (USDA) provided DPI with an award of \$3,447,772 to operate LFS. DPI issued non-competitive sub-awards to School Food Authorities (SFAs) and non-SFA entities. All SFAs (public school districts, private schools, tribal schools, and Residential Child Care Institutions) were eligible to apply for subaward if they participated in the National School Lunch Program (NSLP) or School Breakfast Program (SBP). SFAs utilizing a Food Service Management Company (FSMC) contract, Vended Meal Agreement (VMA), or Joint Meal Agreement (JMA) were also eligible. Eligible non-SFA sub-awardees were non-profit or for-profit food organizations such as food hubs, aggregators, cooperatives, distributors, farmers/producers, and processors that provided local unprocessed or minimally processed food from small businesses and/or socially disadvantaged farmers/producers and distributed qualified products to eligible SFAs.

Sub-awardees, both SFAs and non-SFAs, could submit reimbursements to DPI for purchases of local, unprocessed or minimally processed foods and the storage and distribution directly associated with those foods. Examples of allowable food products included fruits and vegetables (including 100 percent juices); grain products such as pastas and rice; meats (whole, pieces, or food items such as ground meats); meat alternates such as beans or legumes, and fluid milk; and other dairy foods such as cheese and yogurt. The program defined local food as raised, produced, aggregated, stored, processed, and distributed in the locality where the final product was received by SFAs, so that the total distance that the product traveled between farm and where the product was received was at most 400 miles or within the same state.

The typical process for SFA sub-awardees was to order eligible food from a local food hub that worked with several local producers or farmers, or to order directly from a local producer or farmer. After receiving the product, the SFA submitted their invoice to DPI for reimbursement. SFAs did not have to pay for products or incur out of pocket expenses to participate in the LFS Program. The typical process for non-SFA sub-awardees was to offer eligible food to eligible SFAs (which could be sub-awardees or not) and then submit the invoices to DPI for reimbursement. Invoices submitted by sub-awardees (SFAs and non-SFAs) could only be reimbursed by one sub-awardee, not both. Through these processes SFAs, food hubs, and farmers and producers all either directly (by being sub-awardee) or indirectly (by working with a sub-awardee) received benefits from LFS.

To conduct an evaluation of LFS, DPI collaborated with the Wisconsin Evaluation Collaborative (WEC) within the Wisconsin Center for Education Research at the University of Wisconsin-Madison. The evaluation of LFS focused on three main questions:

- I. Who benefited from Wisconsin's LFS program?
  - a. How many SFAs participated in LFS? Where in Wisconsin and in which locales (city, suburb, town, rural) are these SFAs located?
  - b. What are the demographic characteristics of students who benefited from LFS?
  - c. How many farmers/producers benefited from LFS? Where are these farmers/producers located?

2. What types of foods did farmers/producers provide to SFAs?
3. What is the possible economic impact of LFS on local markets?

The remainder of this report covers the methodology used to evaluate LFS and findings of the evaluation including LFS participation and usage, benefits to SFAs, benefits to farmers/producers and the local supply chain, and the estimated economic impact on local markets.

## Methodology

To address the evaluation questions described above, the DPI provided WEC with LFS program administrative data, including reimbursement records for both SFAs and non-SFAs, vendor invoices, and a database of local foods providers. WEC summarized LFS program data by SFA and merged those data with publicly-available DPI data describing SFA enrollment, demographic characteristics, and locations. Each data source is described in detail below.

- *DPI reimbursements records* for both SFAs and non-SFAs, including what SFA received the food, the delivery date, vendor (farmer/producer) information, including address, descriptions of the products purchased, the level of food processing (unprocessed or minimally processed), the invoiced dollar amount, and the dollar amount that was paid to socially disadvantaged producers (many of the invoices were paid to food hubs that bundled products from multiple farmers/producers).
- *Invoice data* consists of image files of all invoices. WEC used invoice data to clarify questions regarding the reimbursement records.
- *Wisconsin Local Foods Database* – producers may voluntarily populate the database with pertinent information such as contact details, foods produced, and delivery area.<sup>1</sup>
- *DPI data on SFAs* including enrollment, demographics, locale, and county:
  - Certified enrollment, including numbers and percentages of students by free or reduced-price lunch (FRL) status, race/ethnicity, special education status, and English Learner status. Note that DPI data for private schools are limited to total enrollment and enrollment of students receiving FRL.
  - Agency data, including locale and county
  - Crosswalk connecting counties to AmeriCorps regions

To assess potential economic impacts of the WI LFS program, WEC reviewed recent impact studies of other, recent Farm to School programs. The literature review focused on the economic impact multiplier, i.e. the ratio of economic impact to program dollars spent. For example, if a Farm to School program spent \$1 million dollars and created an estimated economic impact of \$2 million, then the implied economic impact multiplier would be 2 (\$2 million / \$1 million). The studies included programs from multiple states and were published between 2010 and 2024.

<sup>1</sup> The Wisconsin Local Foods Database is available to the public at <https://sites.google.com/dpi.wi.gov/wilfd/find-farmers>.

## Limitations

There are several limitations of the data and methodology listed above. The primary limitation is that there is little information on how local farmers/producers supplied SFAs before the LFS program began. Likewise, there are no pre-LFS data on the foods served to students at participating SFAs. As a result, the evaluation cannot speak to several goals of LFS, including whether the program increased the quality or diversity of school meals or decreased the amount of processed foods SFAs served. Similarly, available data does not support analysis of whether LFS increased the number of local farmers/producers providing food to SFAs. Although the Wisconsin Local Foods Database existed before the LFS program, inclusion in the database is voluntary, and most farmers/producers do not appear in it.

Second, the level of aggregation of LFS administrative data limits inference on (1) which students and farmers/producers benefited most from LFS and (2) spending on specific foods. For example, because SFAs are the purchasing authorities, the evaluation is unable to discern the students within each SFA who received food from the LFS program. This is because food purchasing is conducted at the local level and line-item reporting of these purchases is not required. This limitation is more problematic for large SFAs with many school sites and substantial demographic differences between school sites, such as Milwaukee or Madison. In addition, other than free or reduced-price lunch (FRL) status, DPI does not have comprehensive demographic data for private SFAs, which limits most of the demographic analysis to public SFAs. Similarly, aggregation in LFS data, which was necessary for the efficiency of program administration, limits the analysis. Food hubs, which aggregate deliveries from multiple farmers/producers, prevent analysis of how spending was distributed to specific farmers/producers. This aggregation also impacts regional estimates of farmer/producer impact, since food hubs include farmers/producers from different regions. LFS administrative data is also aggregated at the invoice level, preventing calculations of the amounts spent on particular foods because invoices could contain multiple different products.

Finally, the economic impact from LFS is an estimate based on other studies that may not fully capture the context of the program in Wisconsin. To mitigate this limitation, this report provides a range of potential impacts based on previous findings.

# Findings

The remainder of the report provides findings that answer the evaluation questions described above. The subsection Program Participation and Usage describes the SFAs and non-SFAs that were awarded LFS funding. Benefits to SFAs describes the types of SFAs that benefited from the program, their demographic composition, their locales (city, suburb, town, rural) and regions. Benefits to Farmers/Producers and the Local Supply Chain details numbers of providers, funding going to all farmers/producers and socially disadvantaged farmers/producers, and farmers/producers' regions in Wisconsin. Estimated Economic Impact describes the research literature on other states' Farm to School programs, those studies' estimates of economic impacts, and what those estimates imply about the Wisconsin LFS program.

## Program Participation and Usage

Both SFAs and non-SFAs could apply for program funding. Table 1 shows that the Wisconsin LFS program reimbursed over \$3.4 million dollars to both SFAs and non-SFAs. A total of 118 SFAs were awarded funds, although only 82 applied for reimbursement. DPI reimbursed SFAs almost \$800,000, or approximately 23 percent of total reimbursements. Eleven non-SFAs were reimbursed over \$2.6 million, or about 77 percent of total funds. At the time that DPI provided evaluators with administrative data, nearly all program awards had been spent, and DPI has since received all reimbursements.

**Table 1: Participation and Reimbursements for SFAs and non-SFA Sub-Awardees**

	SFAS	NON-SFAS	TOTAL
\$ Reimbursed	\$793,619	\$2,617,421	\$3,411,040*
Number	118**	11	

\* Total reimbursed at the time that DPI provided evaluators with administrative data. DPI has since received all reimbursements.

\*\* Of the 118 SFAs awarded LFS funds, 82 applied for reimbursement.

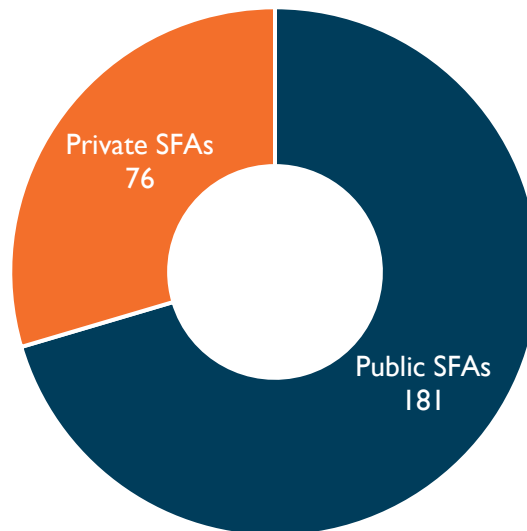
From DPI reimbursement records, evaluators counted each time a food appeared in the data. Due to dollar amounts being associated with invoices rather than foods, however, evaluators could not associate specific dollar amounts with each food, only the number of times foods appeared in each invoice. As shown in Table 2, vegetables were the most commonly invoiced food, followed by fruits and milk. SFAs received and non-SFAs provided a wide range of foods in each category. Examples of that variety also appear in Table 2. All foods purchased via LFS funding were unprocessed or minimally processed.

**Table 2: Ranking of Most Common Food Categories**

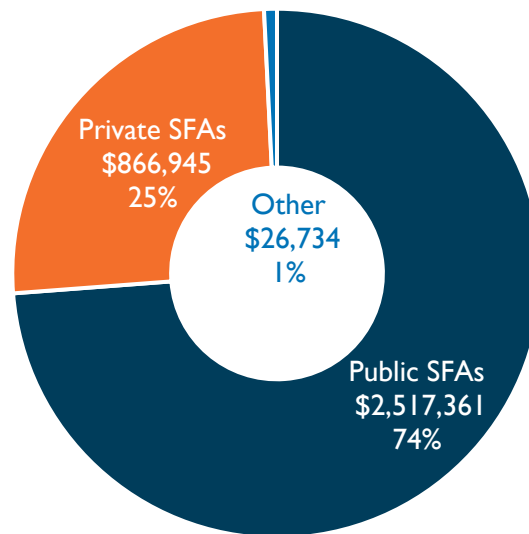
1. Vegetables (e.g. carrots, roasting vegetables, beets, mushrooms)
2. Fruits (e.g. apples, cantaloupe, watermelon chunks, cranberries)
3. Milk (e.g. 1%, fat-free)
4. Meat (e.g. beef stew meat, ground bison, elk roast, walleye)
5. Alternate Protein (e.g. black beans, fresh cheese curds, eggs, yogurt)
6. Other (e.g. honey, maple syrup)
7. Grains (e.g. cornmeal, rye flour, wild rice)

## Benefits to SFAs

Between SFA sub-awardees, SFAs that received food provided by non-SFA sub-awardees, and SFAs that did both, a total of 257 SFAs benefited from the WI LFS. Figure 1 shows that, of those 257 SFAs, 181 were public SFAs and 76 were private SFAs. Approximately three quarters of reimbursements were for food delivered to public SFAs (Figure 2). Socially disadvantaged farmers/producers were more likely to provide food to public SFAs. Socially disadvantaged farmers/producers made up 25 percent of total reimbursements but only 13 percent of socially disadvantaged farmer/producer reimbursements went to private SFAs (not shown).

**Figure 1: Participating SFAs by Type**

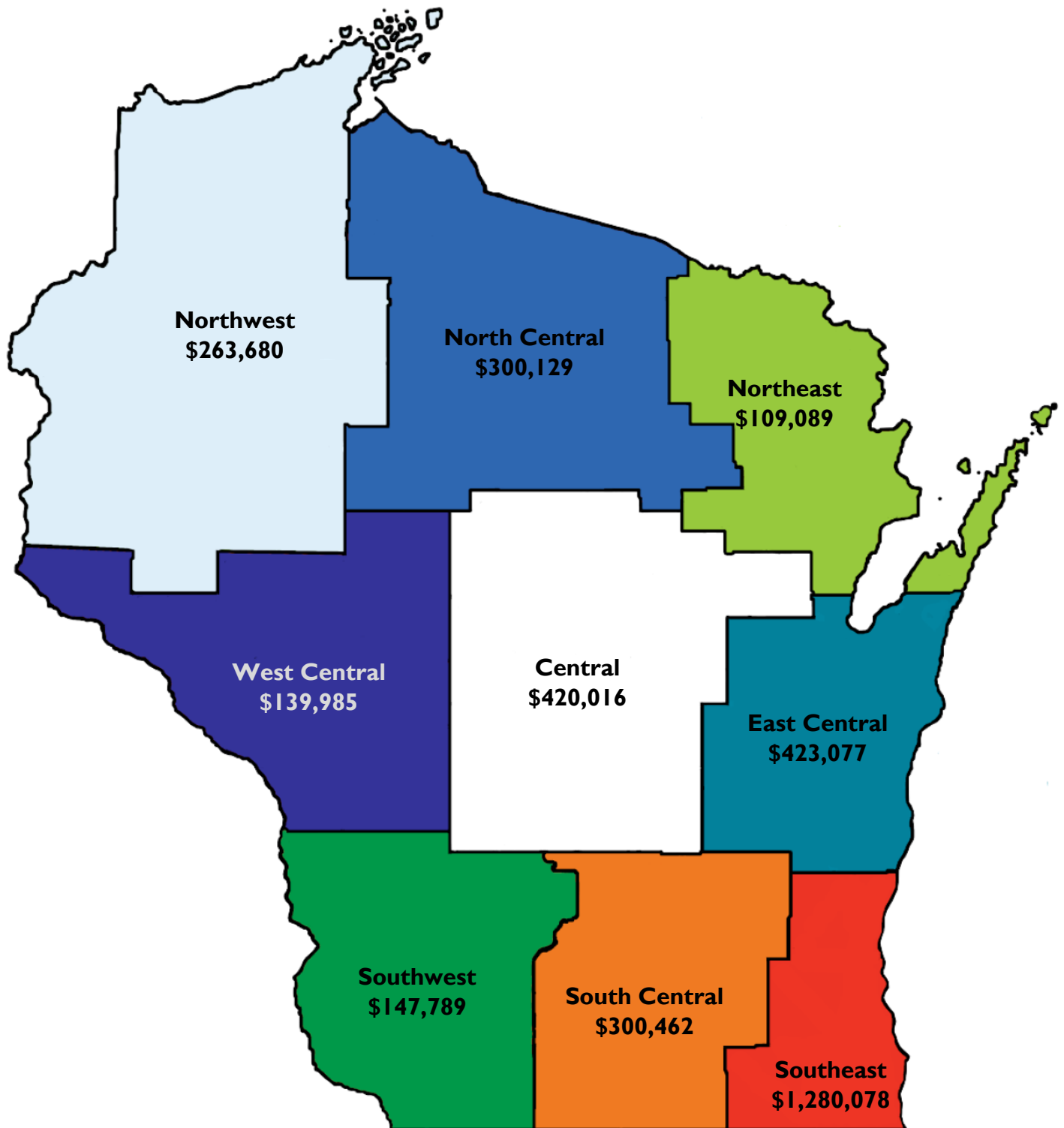


**Figure 2: Reimbursements by the Type of SFA**

Note: Other represents non-SFA allowable non-food expenses that supported LFS Program activity.

Figure 3 shows how WI LFS food deliveries were distributed to participating SFAs around Wisconsin. While some regions benefited more than others from LFS, the magnitude of financial benefit in each region was consistent with the student populations in those regions, as shown in Table 3. SFAs in the Southeast region benefited the most, receiving almost \$1.3 million, more than triple that of the East Central and Central regions, which received over \$400,000 each. SFAs in the Northeast, West Central, and Southwest regions benefited the least from LFS. Table 3 shows that the proportion of financial benefit from LFS closely tracked the proportion of Wisconsin's student population in each region.

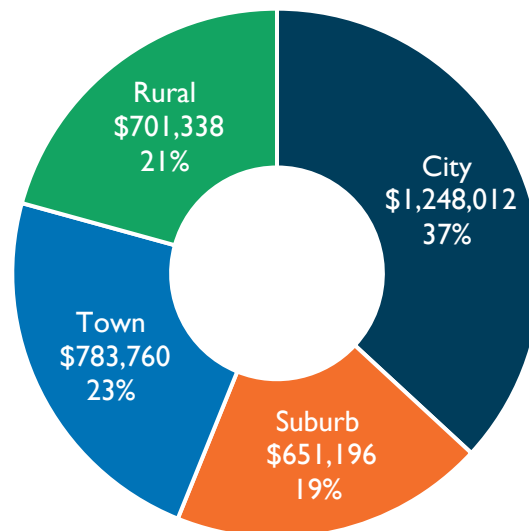
Figure 3: Reimbursements by SFA Region



**Table 3: Reimbursements by SFA Region**

REGION	\$ REIMBURSED	% REIMBURSED	WI STUDENT COUNT	% OF WI STUDENTS
Central	\$420,016	12%	70,126	7%
East Central	\$423,077	13%	170,660	18%
North Central	\$300,129	9%	23,473	2%
South Central	\$300,462	9%	149,248	16%
West Central	\$139,985	4%	67,522	7%
Northeast	\$109,089	3%	16,463	2%
Northwest	\$263,680	8%	61,257	6%
Southeast	\$1,280,078	38%	350,481	37%
Southwest	\$147,789	4%	33,760	4%

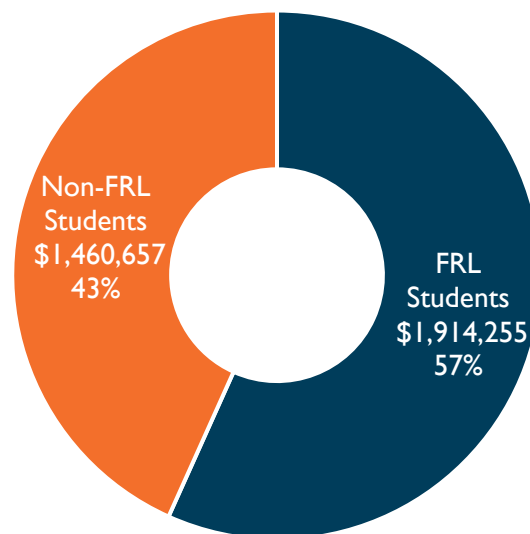
Over one-third of LFS reimbursements benefited students in SFAs located in cities (Figure 4). The remainder of benefits were approximately evenly distributed among suburban, town, and rural SFAs. Although 96 of the 257 participating SFAs were located in rural areas, only 21 percent of LFS' monetary benefits flowed to those SFAs, reflecting that those SFAs are generally smaller in size than their urban counterparts.

**Figure 4: Reimbursements by SFA Locale**

In addition to analyzing how LFS benefits differed by SFA characteristics, evaluators also estimated how benefits varied by the characteristics of students in those SFAs. To do so, evaluators merged LFS data with DPI education agency-level demographic data. Then, evaluators calculated LFS dollars apportioned to each demographic group by assuming that LFS dollars were distributed equally among all the students in a given SFA. This assumption was necessary because LFS reimbursement data is reported at the SFA level, and therefore we do not necessarily know which school sites within an SFA received the food. This assumption is most true for SFAs with few school sites and/or relatively uniform student characteristics but would be less true for a SFA with many school sites where student characteristics vary widely across schools (e.g. Milwaukee). A second limitation, as noted above, is that private SFAs are not required to submit demographic data. As a result, analyses by race/ethnicity, English Learner (EL) status, and special education (SPED) status do not include data from private SFAs. Finally, note that because the methodology calculated dollars spent on each student at the SFA level, the total dollar amounts in Figures 5 through 8 are slightly different from the total dollar amounts reported in Table 1 and Figure 2.

Figure 5 shows that approximately 57 percent of LFS reimbursements went to students who receive FRL. In 2023-24, approximately 42 percent of Wisconsin students received FRL.<sup>2</sup>

### Figure 5: Reimbursements by Student FRL Status

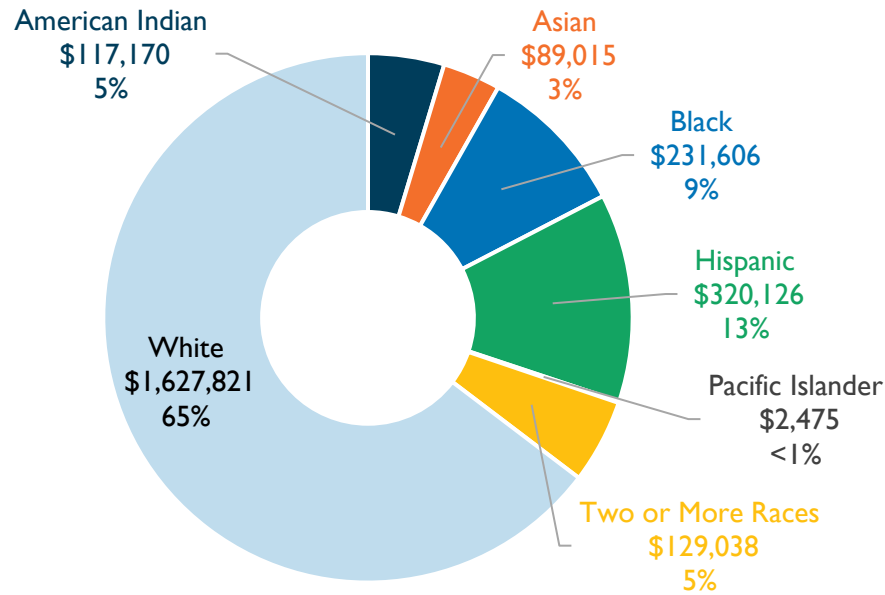


Note: FRL status by school site was unavailable for three SFAs, whose reimbursements are not included. Reimbursements in Figure 5 represent 99 percent of the LFS total.

<sup>2</sup> Wisconsin Department of Public Instruction. WISEdash Portal. <https://wisedash.dpi.wi.gov/Dashboard/dashboard/22275>. Retrieved September 6, 2024.

Figure 6 shows that, at public SFAs, about 65 percent of LFS reimbursements went to White students, 13 percent to Hispanic students, and 9 percent to Black students. These percentages are consistent with the representation of each race/ethnicity in the Wisconsin public SFA student population, with the exception of American Indian students, who received 5 percent of LFS reimbursements but make up 1 percent of Wisconsin's student population.<sup>3</sup>

**Figure 6: Reimbursements by Student Race/Ethnicity**



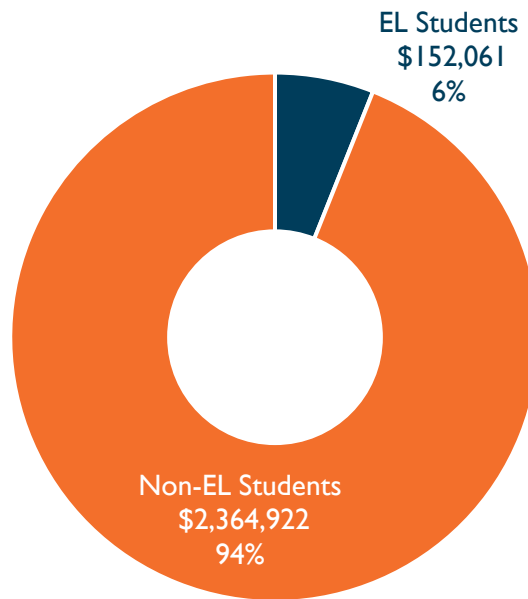
Note: Public SFAs only. Race/ethnicity data is not available for private SFAs, whose reimbursements are not included. Reimbursements in Figure 6 represent 74 percent of the LFS total.

Figures 7 and 8 show that, in public SFAs, approximately 6 percent of reimbursements went to EL students and 16 percent went to SPED students. Again, the proportions of reimbursements flowing to EL and SPED students are similar to the proportions of both demographics in the Wisconsin public SFA population.<sup>4</sup>

<sup>3</sup> Ibid.

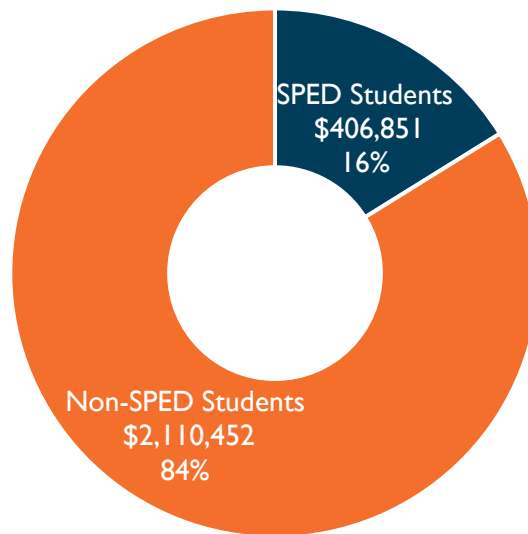
<sup>4</sup> Ibid.

**Figure 7: Reimbursements by Student English Learner Status**



Note: Public SFAs only. English Learner status is not available for private SFAs, whose reimbursements are not included. Reimbursements in Figure 7 represent 74 percent of the LFS total.

**Figure 8: Reimbursements by Student Special Education Status**



Note: Public SFAs only. Special education status is not available for private SFAs, whose reimbursements are not included. Reimbursements in Figure 8 represent 74 percent of the LFS total.

## Benefits to Farmers/Producers and the Local Supply Chain

Farmers and producers could benefit from LFS through several ways:

- Being a non-SFA sub-awardee that was reimbursed by DPI for providing food to SFAs,
- Providing food directly to a SFA sub-awardee that was reimbursed by DPI,
- Working with a food hub that was a non-SFA sub-awardee that then provided food to a SFA and was reimbursed by DPI,
- Working with a food hub that provided food to a SFA sub-awardee what was reimbursed by DPI, or
- Being a non-SFA sub-awardee that was reimbursed for eligible LFS activity<sup>5</sup>.

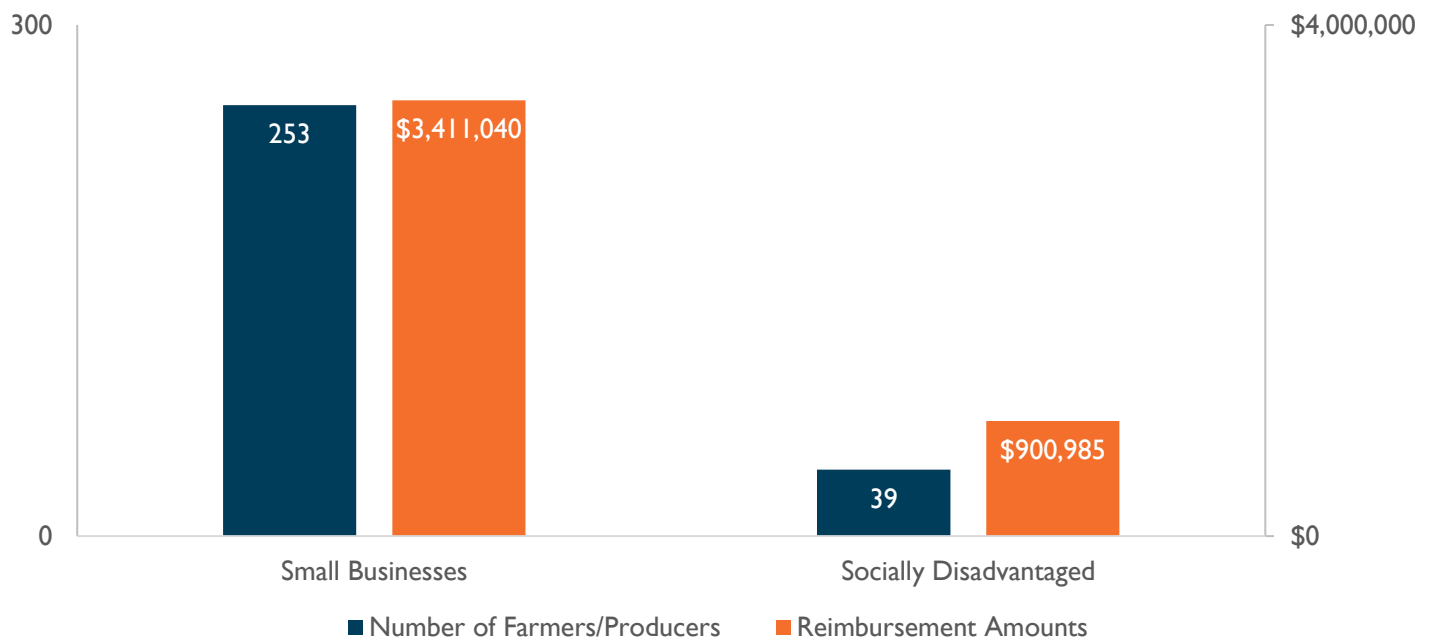
Through any of these mechanisms, a local farmer/producer involved in LFS would have benefited from the program through reimbursement, either directly or indirectly, and thus those farmers/producers involved in LFS would have received some level of additional funding that they would not have otherwise received. Through this process, the local supply chains surrounding these farmers/producers benefited from LFS.

While there were only 11 non-SFA awardees, a total of 253 farmers/producers were involved in LFS in some way. All 253 farmers/producers were small businesses, and 39 of them (or 15 percent) self-identified as socially disadvantaged farmers/producers. Reimbursement records indicated that of the \$3,411,040 total reimbursements, \$900,985 (or 26 percent) of the reimbursements were for socially disadvantaged farmers/producers. Refer to Figure 9 for more information.

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<sup>5</sup> Costs for local, unprocessed or minimally processed food and the storage and distribution directly associated with those foods.

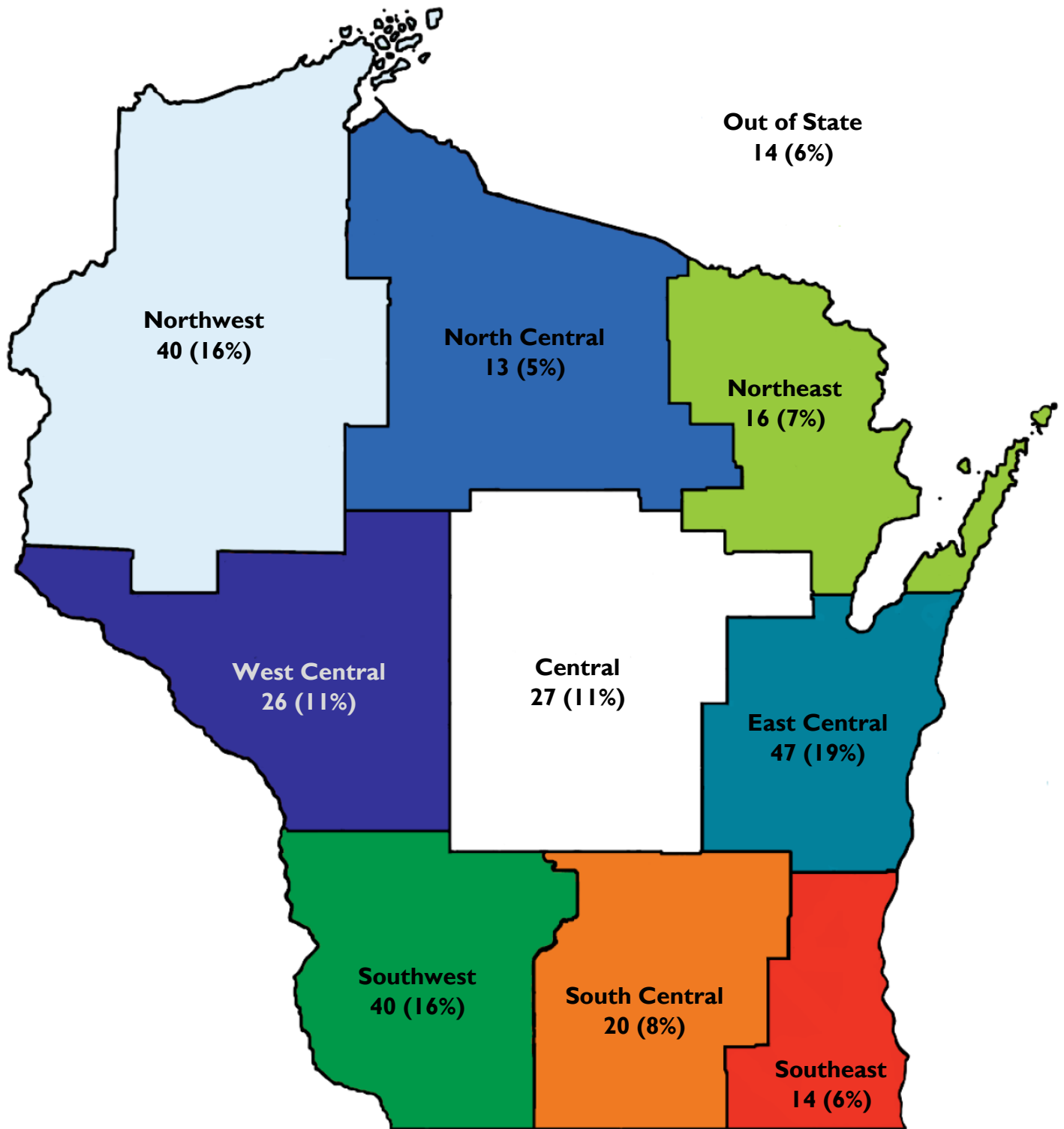
**Figure 9: Small Business and Socially Disadvantaged Farmers/Producers  
Number and Reimbursement Amounts**



While reimbursement records did not allow for examination of how much went to each region, the evaluation was able to examine how many LFS farmers/producers were in each region of Wisconsin. Figure 10 shows that there were at least 10 farmers/producers in each region of the state with the East Central region having the most (47 farmers/producers) and the North Central region having the least (13 farmers/producers). Only 14 (or 6 percent) of farmers/producers were outside of Wisconsin.



Figure 10: Producers by Region



## Estimated Economic Impact

To examine the possible economic impact of LFS, the evaluation first reviewed prior relevant studies of programs supporting SFA food purchases. All of the studies examined measured how hypothetical or actual changes in economic activity associated with these programs impacted the overall spending in a geographic area. This increased impact results in a multiplier effect – each dollar spent on an activity results in more than one dollar in total economic impact. Table 4 shows all of the studies reviewed and the multiplier identified from their results. The studies' estimated multipliers ranged from a low of 1.06 to a high of 2.40, or in other words, each dollar spent resulted in an economic impact of \$1.06 to \$2.40, depending on the study.

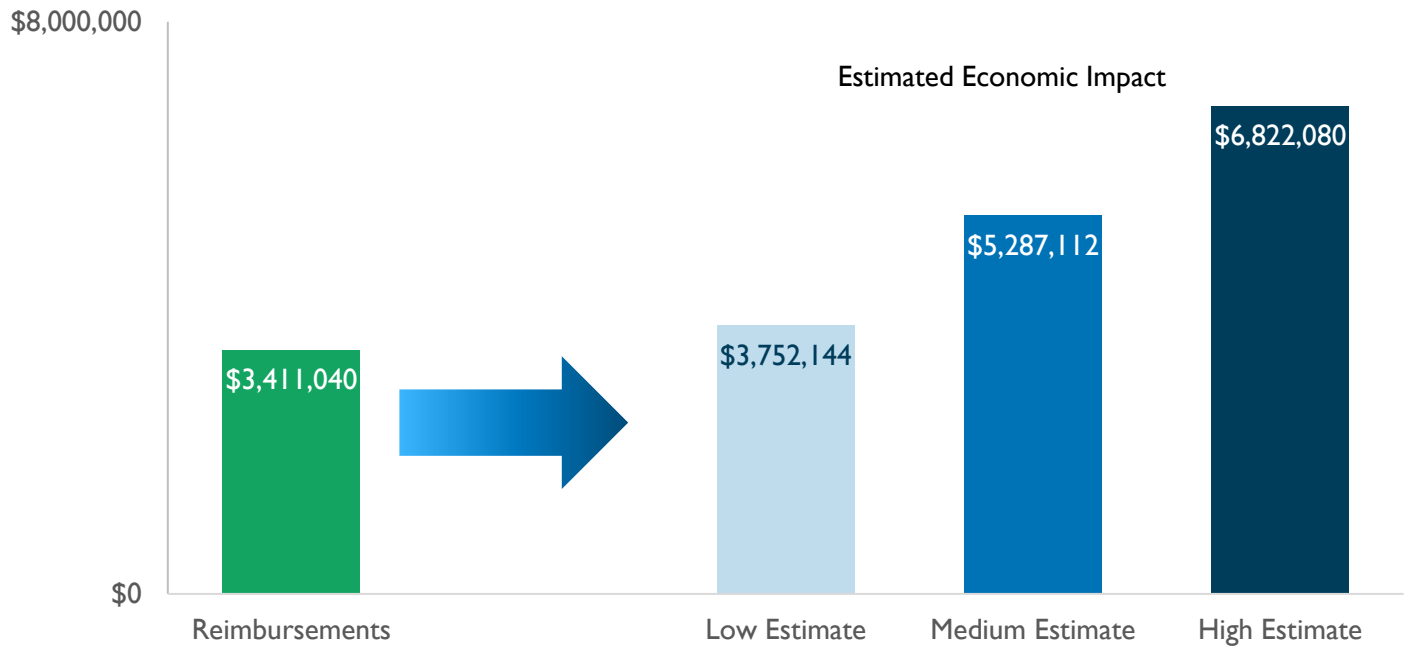
**Table 4: Review of Economic Impact Studies**

STUDY	LOCATION	RANGE OF MULTIPLIER
Krasnoff, Schmit, & Bilinski, 2023	New York	1.06
Gunter, 2011	Colorado	1.47-1.63
Rosche et al., 2015	Vermont	1.60
Pesch, 2014	Minnesota	1.70
Kluson, 2012	Florida	1.84-2.40
Kane et al., 2010	Oregon	1.86
Enelow, 2015	Oregon	2.00
Henderson et al., 2011	Oregon	2.16

Note: Some results presented in this table adapted from Becot et al., 2017.

Based on these prior studies, this evaluation provides a range of possible estimated economic impacts of LFS using a low multiplier of 1.10 and a high multiplier of 2.00. While there were two studies that provided multipliers above 2.00, this evaluation chose to remain conservative in their estimates of impact. For a mid-level estimated impact, we chose 1.55, the midpoint between 1.10 and 2.00. Figure 11 shows the total reimbursements of LFS, and the resulting associated low, medium, and high estimated economic impacts ranging from approximately \$3.8 to \$6.8 million.

Figure 11: Estimated Economic Impact of LFS



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