MILK HAULING CHARGES IN THE UPPER MIDWEST MARKETING AREA

MAY 2023

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Prepared by:

Areerat Kichkha

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Federal Milk Market Administrator's Office
1600 West 82nd Street, Suite 200
Minneapolis, MN 55431-1420

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Introduction

This study categorizes and analyzes hauling charges based on state, county, and producer size groups for May 2023. The payroll data for 8,822 dairy producers who were associated with the Upper Midwest Federal Milk Order were examined [2]. The Federal Order 30 Market Administrator's producer database allows options for handlers to report a line-item fee for hauling that can include, but is not limited to, stop charges, fuel charges, or a flat fee. Some handlers will do a combination of charges necessitating some calculations to arrive at a total hauling charge from the database.

Table 1

Average Hauling Charges for the Marketing Area for May

Statistic	2023	2022
Producer Deliveries (pounds)	4,580,392,718	4,571,925,421
Total Hauling Charges	$ 19,248,843.56	$ 18,986,472.21
Weighted Average Charges (per cwt.)	**$ 0.4202**	**$ 0.4153**

A flat fee structure possibly leads to a decreasing average hauling charge as viewed on a per hundredweight basis. The possibility also exists that the hauling charge relationship for large producers may differ on a handler-by-handler basis. This relationship may mean the producer pays all charges external to the handler's payroll or may haul their own milk. Previous analysis has indicated that hauling charges are a function of producer pounds, the farm's distance to plants, the farm's distance to population centers, competition among handlers, and the concentration of dairy farms in the local market.

[1] The author, Dr. Areerat Kichkha, is an Agricultural Economist with the Market Administrator's Office, Minneapolis, Minnesota.

[2] Changes were made in the methodology of this paper in 2011. The method used prior to 2011 would have resulted in an average hauling charge for 2023 of $0.6137 per cwt., compared to $0.6177 for 2022. These values are possible to calculate using data from Table 3. Data from 2011 to present are aggregated at the farm level and restricted to States within Federal Order 30 resulting in lower farm counts compared to earlier analysis. The hauling charges in Table 1 are weighted by the producer milk pounds delivered.

Analysis by Size Group

Table 2 presents the May 2023 data for each of ten size groups. Skewness dominates the results in Table 2, with nearly 60% of the milk produced by 7.8% of the farms. In addition, these largest categories of farms pay about 50% of the total hauling charges. Chart 3, on Page 6, shows the inverse relationship between average pounds of production and average hauling charges for each size category.

Table 2

Average Producer Delivery, by Size Range, for May 2023

Size Range	Simple Average Hauling Charges	Total Hauling Charges	Production	Number of Farms	Producer Average Monthly Delivery	Weighted Average Hauling Charge
(pounds)	($ per cwt.)	($)	(pounds)		(pounds)	($ per cwt.)
Up to 49,999	0.9476	371,220.07	44,255,266	1,599	27,677	0.8388
50,000 to 99,999	0.5946	768,625.47	131,320,758	1,771	74,151	0.5853
100,000 to 249,999	0.5153	2,119,819.56	411,051,586	2,637	155,878	0.5157
250,000 to 399,999	0.5256	1,298,162.88	246,952,241	786	314,189	0.5257
400,000 to 599,999	0.5382	1,443,022.84	268,014,189	548	489,077	0.5384
600,000 to 999,999	0.5048	1,946,189.52	383,329,423	497	771,287	0.5077
1,000,000 to 1,499,999	0.4574	1,654,675.45	364,296,135	300	1,214,320	0.4542
1,500,000 to 2,499,999	0.4235	2,418,379.33	574,739,559	300	1,915,799	0.4208
2,500,000 to 4,999,999	0.3422	2,735,586.20	802,340,710	232	3,458,365	0.3410
5,000,000 or more	0.3312	4,493,162.24	1,354,092,851	152	8,908,506	0.3318
Total or Average	**0.5985**	**19,248,843.56**	**4,580,392,718**	**8,822**	**519,201**	**0.4202**

Analysis by State

Table 3 represents the May data for each state comprising the Order. Analyzing hauling charges by state has previously led Federal Order 30 staff to hypothesize that non-scale factors affect hauling charges. These include distance to plants and population centers, competition among handlers, along with the predominance of dairying in a market. These factors have been tested and their relevance supported in earlier papers available here: https://www.fmma30.com/Staff_Papers.html.

Table 3

Average Producer Delivery, by State, for May 2023

State	Simple Average Hauling Charges	Total Hauling Charges	Production	Number of Farms	Producer Average Monthly Deliver	Weighted Average Hauling Charge
	($ per cwt.)	($)	(pounds)		(pounds)	($ per cwt.)
Illinois	0.9821	1,068,312.12	133,953,688	358	374,172	0.7975
Iowa	0.8601	2,329,952.55	439,062,006	622	705,887	0.5307
Michigan UP	1.1602	82,182.97	11,348,177	22	515,826	0.7242
Minnesota	0.5197	3,389,384.59	891,769,362	2,013	443,005	0.3801
North Dakota	1.1352	180,788.45	19,835,697	31	639,861	0.9114
South Dakota	0.7236	1,608,799.01	379,563,198	152	2,497,126	0.4239
Wisconsin	0.5648	10,589,423.87	2,704,860,590	5,624	480,950	0.3915
Total or Average	**0.8494**	**19,248,843.56**	**4,580,392,718**	**8,822**	**519,201**	**0.4202**

As seen in Table 3, Michigan Upper Peninsula (Michigan UP) has the highest simple average hauling charges, and North Dakota is the second highest, a few cents behind. The area producers have fewer plants and less handler competition. Minnesota and Wisconsin in contrast have low average hauling charges with a high number of farms generally in close proximity to high demand areas. The average pounds in this table, however, do not correlate as well as Table 2 with average hauling charges, implying additional factors determine a farmer's hauling charge.

On the following page, Table 4 shows the May diesel fuel price in relation to the May average hauling charges. Additionally, the table shows the percentage change from the previous year for both the price of fuel and average hauling charges. The hauling charges show less fluctuation when compared to the more volatile fuel price. That volatility is evident in the large positive and negative percentage changes in fuel prices from year to year. In contrast, the percentage changes in the average hauling charge are much smaller. Given the handlers' tendency to subsidize hauling charges, this smaller volatility indicates a strong tendency to resist passing through the increased hauling costs.

Table 4

Midwest Retail Fuel Price and Average Hauling Charges [3]

Year	May Fuel Price	Change from Previous Year	May Average Hauling Charges	Change from Previous Year
	($ per gallon)	(%)	($ per cwt)	(%)
2013	3.907	0.77	0.3183	- 4.36
2014	3.910	0.07	0.3280	3.05
2015	2.764	- 29.31	0.3131	- 4.54
2016	2.282	- 17.44	0.3263	1.44
2017	2.494	9.29	0.3409	4.48
2018	3.179	27.47	0.4793	40.59
2019	3.049	- 4.09	0.5015	4.63
2020	2.237	-26.53	0.4985	-4.74
2021	3.162	41.07	0.5087	2.04
2022	5.320	68.35	0.6177	21.43
2023	3.832	-27.97	0.6137	-0.66

Chart 1 on the next page shows that 78.6% of the milk delivered on Federal Order 30 was from Wisconsin and Minnesota. The other states on the order each had 9.6% or less of the milk delivered. This predominance for Wisconsin and Minnesota indicates that their weighted averages will pull the overall average for the order down relative to Michigan UP and North Dakota. Wisconsin and Minnesota not only have most of the milk production, but also have close proximity to the majority of the population centers and processing plants.

Chart 2 on Page 6 shows the milk production percentage for each size class and also the percentage of total hauling charges paid by each size class. For the seven smallest size classes, the percentage of hauling charges is greater than the percentage of total production. For the latter three classes, their percentage of hauling charges is either about the same, or smaller than, their percentage of production. The most common explanation for this distribution of charges is that hauling costs are higher for smaller farms, given the increased number of stops in order to fill out a load. Chart 3, on Page 6, builds on Chart 2's size range distribution to show that average hauling charges and average milk production are inversely related.

[3] The hauling charges presented are a simple average by state weighted by the state milk production to generate a weighted average for the Federal order. Being based on a state simple average increases the likelihood that it approximates a typical dairy farmer's average hauling charge over an average weighted by every producer's production.

See https://www.eia.gov/dnav/pet/hist/LeafHandler.ashx?n=pet&s=emd_epd2d_pte_r20_dpg&f=m for the Midwest retail fuel prices data, .

Percentage of Milk Deliveries by State

In May 2023, dairy producers from three states delivered the majority of the milk associated with the Upper Midwest Order. Wisconsin producers delivered the largest volume of any of the states by supplying 59.1% of the total milk volume associated with the market. Producers from Minnesota and Iowa were second and third, respectively, in milk volume supplied to the order.

Chart 1

Percentage of Delivery Volume, by State, for May 2023

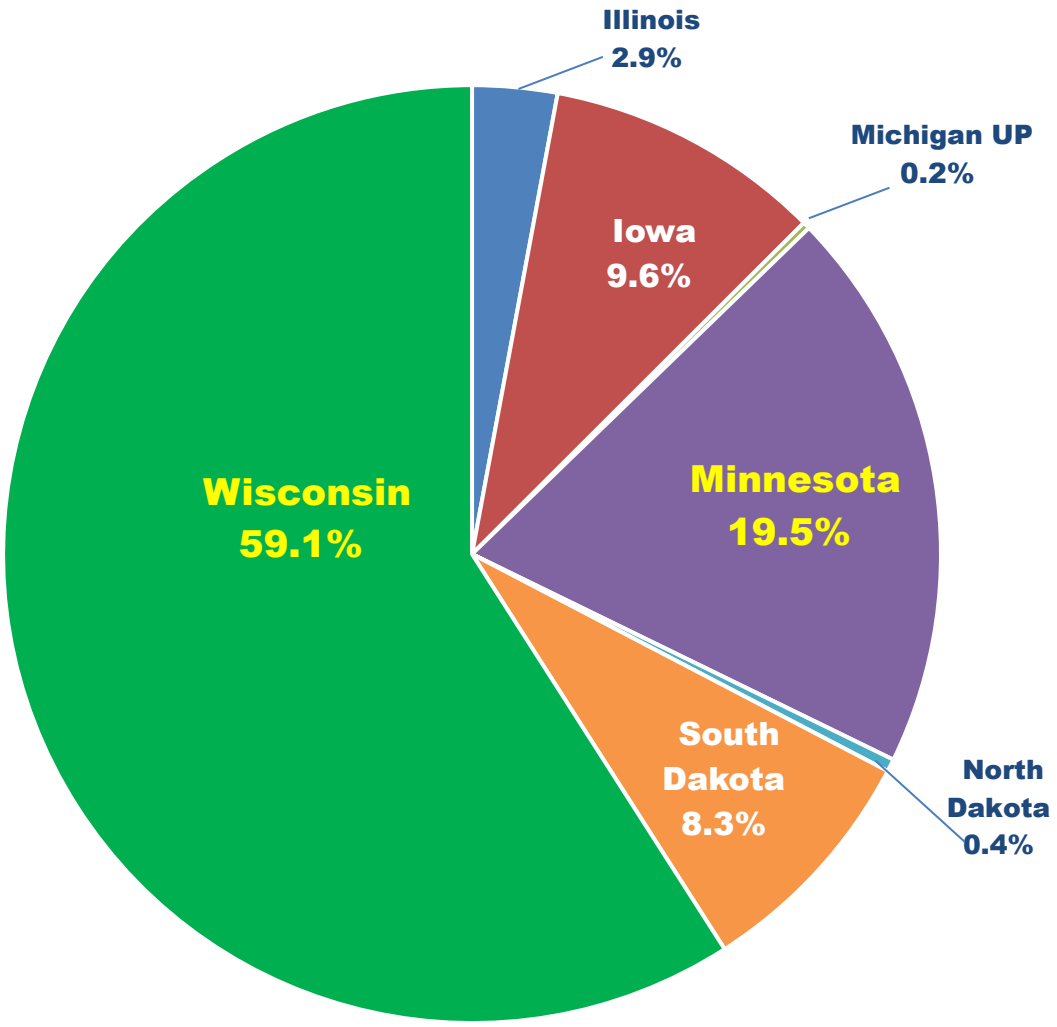


Chart 2

Percentage of Hauling Charges and Producer Deliveries, for May 2023

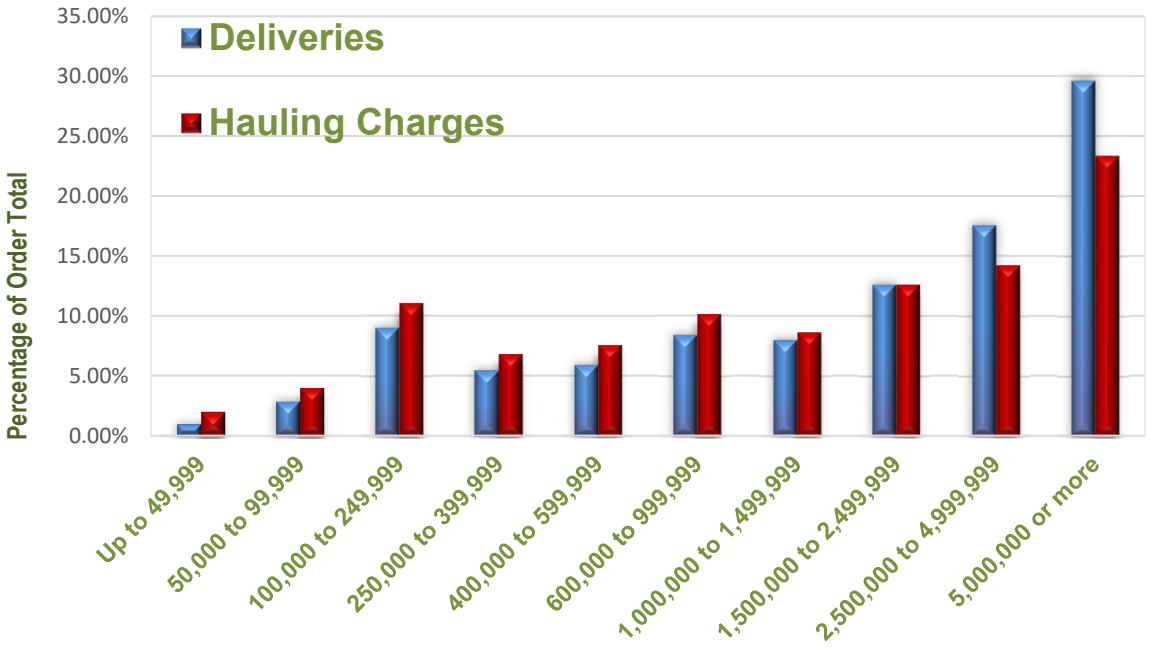
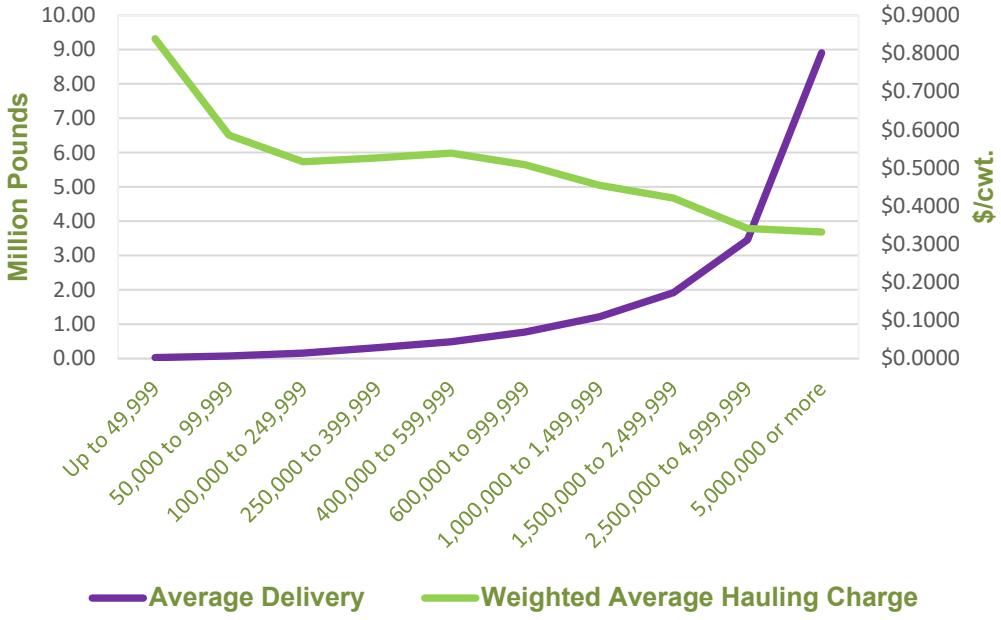


Chart 3

Producer Delivery versus Average Hauling Charges for May 2023



Average Milk Hauling Charges by Size Range of Producer Delivery

The data shown in Table 5 indicates that there are several other factors that contribute to fluctuating hauling charges. The aforementioned relationship between farm location and distances to competing dairy plant manufacturing operations does not explain all of the variation in average hauling charges. This study found that even though a specific dairy producer may be located a very long distance from the Upper Midwest market's largest fluid milk disposition area, it does not necessarily mean that this producer will pay the market's highest rate per hundredweight for hauling. This study recognizes that other factors exist; including the fact that a dairy producer's milk volume influences the producer's cost of hauling.

Table 5 displays the market's dairy producers in ten size ranges, or producer milk volume categories. The numbers presented in Table 5 show a strong indication that as a producer's milk volume increases, the average hauling charge per hundredweight decreases.

Table 5

Average Hauling Charges, by Size Range and State, for May 2023

(Dollars per cwt.)

Size Range	Illinois	Iowa	Michigan	Minnesota	North Dakota	South Dakota	Wisconsin	Weighted Average Hauling Charge
Up to 49,999	1.3101	1.0510	R	0.7951	1.3798	1.1482	0.7996	0.8388
50,000 to 99,999	1.0983	1.0301	1.2523	0.5008	1.2237	0.9715	0.5323	0.5853
100,000 to 249,999	0.8752	0.8776	1.2802	0.4008	1.0300	0.8378	0.4809	0.5157
250,000 to 399,999	0.8920	0.6612	1.2802	0.3370	1.0436	0.6458	0.5256	0.5257
400,000 to 599,999	0.9744	0.7208	R	0.3423	R	0.6761	0.5351	0.5384
600,000 to 999,999	0.9016	0.6349	0.8768	0.4256	--	0.5901	0.4838	0.5077
1,000,000 to 1,499,999	0.8953	0.6550	R	0.3373	R	0.3586	0.4450	0.4542
1,500,000 to 2,499,999	0.7933	0.4786	--	0.4038	R	0.5620	0.3868	0.4208
2,500,000 to 4,999,999	0.4724	0.5854	R	0.3476	0.8676	0.4269	0.2838	0.3410
5,000,000 or more	R	0.3756	--	0.3629	--	0.3961	0.2821	0.3318
Weighted Average Hauling Charge	0.7975	0.5307	0.7242	0.3801	0.9114	0.4239	0.3915	0.4202

R = Restricted, fewer than three producers. -- No producers.

The study acknowledges that there are several major factors causing differences in hauling charges between individual producer sizes. The most obvious factor responsible for influencing the producer's hauling rate per hundredweight, by size range, is that many Upper Midwest handlers use a fixed hauling charge, regardless of the volume of milk the particular producer is marketing. Therefore, as one of these producers' milk production increases, the hauling charge per hundredweight will automatically decrease. This increase / decrease relationship is apparent when examining most of the data in Table 5.

Further, this study finds that 78.6% of the producer milk is procured from Minnesota and Wisconsin. The study also finds that these two states have more small dairy producers. Many of these producers are located near multiple milk processors. Therefore, these producers may pay for shorter hauling distances, and their hauling charges on a per hundredweight basis, therefore, are going to be less than similar size producers located in other parts of the market's procurement area. Chart 3 shows the average hauling charges, by size range, for all producer milk associated with the market for May 2023.

As mentioned above, one factor that contributes to varying hauling rate charges is the dairy producer's location in the market, or those areas possessing strong procurement competition among fluid dairy processors and/or cheese manufacturing plants. This factor is quite noticeable in the milkshed areas found in Minnesota and Wisconsin. The study finds that lower hauling charges in these areas reflect strong procurement competition accompanied by shorter hauling distances between dairy farm operations and dairy manufacturing plants.

Analysis of Producers with Zero Milk Hauling Charges

A small percentage of producers on Federal Order 30 have zero hauling charges listed in handlers' payroll records. Reasons for this lack of deduction include use of waiving the hauling charge as a milk procurement tool, hauling for the producer may be self-funded separate from the handler, or the handler may pay for the hauling via a third-party hauler that is not reflected in the payroll records submitted to this office. Substantial anecdotal evidence indicates that the two latter situations account for nearly all the zero hauling deductions.

Tables 6 and 7 indicate that the producers with zero hauling charges are spread among all the size categories with more producers not paying hauling in the more plentiful small size categories.

The tables also indicate that more farms are charged no hauling in states with more dairy farms such as in Minnesota and Wisconsin. The overall average producer delivery for zero hauling charge producers greatly exceeds that of the larger dataset as shown in Table 3.

Table 6

Producers with Zero Hauling Charges, by Size Range, for May 2023

Size Range	Production	Number of Farms	Producer Average Monthly Delivery
	(pounds)		(pounds)
Up to 49,999	3,401,654	123	27,656
50,000 to 99,999	5,535,031	78	70,962
100,000 to 249,999	8,772,789	58	151,255
250,000 to 399,999	4,316,911	14	308,351
400,000 to 599,999	8,587,714	18	477,095
600,000 to 999,999	19,027,454	24	792,811
1,000,000 to 1,499,999	28,532,613	23	1,240,548
1,500,000 to 2,499,999	82,800,546	42	1,971,442
2,500,000 to 4,999,999	183,902,756	53	3,469,863
5,000,000 or more	452,917,537	47	9,636,543
Total	**797,795,005**	**480**	**1,662,073**

Table 7

Producers with Zero Hauling Charges, by State, for May 2023

State	Production	Number of Farms	Producer Average Monthly Delivery
	(pounds)		(pounds)
Illinois	20,709,966	13	1,593,074
Iowa	70,249,814	21	3,345,229
Minnesota	97,667,242	59	1,655,377
South Dakota	67,909,003	10	6,790,900
Wisconsin, North Dakota, and Michigan UP	541,258,980	377	1,435,700
Total	**797,795,005**	**480**	**1,662,073**

Effects of Zero Hauling Charges on Order-Wide Data

The dairy farms producing milk for which there is no deduction on the producer payroll accounted for 797,795,005 pounds in 2023. Recalculating the weighted average hauling charges, for the order as a whole, entails dividing the total hauling charges by the production on the order, less the production of the dairy farms with zero hauling charge. This recalculation is **($19,248,844.21 / 4,580,392,718) * 100 = $0.5089**. The weighted average hauling charge per hundredweight increases from $0.4202 to $0.5089.

This procedure is repeated in Table 8 and Table 9 for the weighted average hauling charges, by scale and by state, using data from Tables 2, 3, 6 and 7.

Table 8

Average Hauling Charges, by Size Range, with Zero Charges Removed, for May 2023

Size Range	Total Hauling Charges	Production	Production Without Zeros	Weighted Average Charges Without Zeros
	($)	(pounds)	(pounds)	($ per cwt.)
Up to 49,999	371,220	44,255,266	40,853,612	0.9087
50,000 to 99,999	768,625	131,320,758	125,785,727	0.6111
100,000 to 249,999	2,119,820	411,051,586	402,278,797	0.5270
250,000 to 399,999	1,298,163	246,952,241	242,635,330	0.5350
400,000 to 599,999	1,443,023	268,014,189	259,426,475	0.5562
600,000 to 999,999	1,946,190	383,329,423	364,301,969	0.5342
1,000,000 to 1,499,999	1,654,675	364,296,135	335,763,522	0.4928
1,500,000 to 2,499,999	2,418,379	574,739,559	491,939,013	0.4916
2,500,000 to 4,999,999	2,735,586	802,340,710	618,437,954	0.4423
5,000,000 or more	4,493,162	1,354,092,851	901,175,314	0.4986
Total	**19,248,844**	**4,580,392,718**	**3,782,597,713**	**0.5089**

Table 9

Average Hauling Charges, by State, with Zero Charges Removed, for May 2023

State	Total Hauling Charges	Production	Production Without Zeros	Weighted Average Charges Without Zeros
	($)	(pounds)	(pounds)	($ per cwt.)
Illinois	1,068,312	133,953,688	113,243,722	0.9434
Iowa	2,329,953	439,062,006	368,812,192	0.6317
Michigan	82,183	11,348,177	6,371,618	1.2898
Minnesota	3,389,385	891,769,362	794,102,120	0.4268
North Dakota	180,788	19,835,697	16,270,627	1.1111
South Dakota	1,608,799	379,563,198	311,654,195	0.5162
Wisconsin	10,589,424	2,704,860,590	2,172,143,239	0.4875
Total	**19,248,844**	**4,580,392,718**	**3,782,597,713**	**0.5089**

Average Milk Hauling Charges by State and County

In the Appendix is a list of average hauling charges by State and County. The counties with the highest average hauling charges were mainly located in northern Iowa and Illinois. The study acknowledges that many of these counties lack multiple dairy plant operators and/or ample local competition for milk procurement. The dairy producers and plant operations found in these areas are geographically more scattered compared to many dairy producers and plant operations in other counties within the marketing area. The added distance between these farms and plants raises the actual transportation cost for moving their milk to market.

As mentioned above, the vast majority of handlers on this market charge producers a flat hauling value, regardless of the size or volume of milk being marketed. Therefore, the lower the producer's milk production, the higher the average hauling charge on a per hundredweight

basis. This study finds that many of these semi-remote counties do in fact lack a couple of these "large dairy farm" operations that would otherwise have decreased the county's average hauling rate considerably. Many of these smaller farms were located in these more remote counties possessing lower populations.

Many of the counties that had the lowest average hauling charges are geographically located in close proximity to large Class I fluid markets. Most of the counties with the lowest average hauling charges were found in areas with large numbers of dairy farm operations and/or within close proximity to multiple competing dairy manufacturers. Most of the counties with the lowest average hauling charges had several large dairy farm operations that helped to reduce the county's average hauling rate considerably.

Summary

The average hauling distance to the point of delivery is normally highest in perimeter, remote and/or isolated counties. In many instances, the added cost required for hauling milk in these areas, combined with a lack of competition among milk procuring handlers, results in an increase in the average hauling charges. On the other hand, counties with the lowest average hauling charges tend to be located in areas with relatively high concentrations of dairy farms, combined with an adequate supply of milk procuring handlers.

This study revealed that a majority of handlers participating in the Upper Midwest Marketing Order charge their producers a flat hauling value, regardless of the producer's size or volume of milk being marketed. In each of these cases where the handler charges a flat rate, the hauling charge per hundredweight declines as the producer's milk volume increases. A specific county's average hauling charge can be greatly influenced by the county's composition of farm sizes.

Weighted average hauling charges are lowest for larger producers in states with a high concentration of milk processors and population centers. Hauling charges are highest for small producers at increased distances to processors and the effect is amplified if the concentration of farms is lower. These effects lead to larger charges for farmers in Northern Iowa, Illinois, and the distant counties in Minnesota and South Dakota. Lastly, the weighted average hauling charges for Federal Order 30 show handlers passed on little of the recent changes in fuel costs to farmers.

Appendix

Upper Midwest Order Reported Payroll Average Hauling Charges, By state and County, for May 2023

State	County	Simple Average Hauling Charges	Weighted Average Hauling Charges
		---------- (Dollars Per Cwt.) ----------	
Illinois	Adams	1.2077	0.6442
	Bond	0.9345	1.0790
	Boone	0.8111	1.1509
	Carroll	0.7237	0.3621
	Champaign	R	R
	Clark	R	R
	Clay	R	R
	Clinton	0.9166	1.0231
	Cumberland	0.8158	0.8066
	De Kalb	0.5779	0.6361
	Douglas	1.1626	1.1630
	Effingham	0.8114	0.8121
	Fayette	0.9938	0.8619
	Franklin	R	R
	Fulton	R	R
	Hancock	R	R
	Iroquois	R	R
	Jackson	2.0437	1.2306
	Jasper	0.7867	0.7858
	Jo Daviess	0.4968	0.4039
	Kane	0.6197	0.7547
	Kendall	R	R
	Lake	R	R
	La Salle	R	R
	Livingston	1.2327	1.1871
	Logan	R	R
	McHenry	0.6177	0.5694
	McLean	R	R
	Macoupin	R	R
	Madison	0.8495	0.8332
	Marion	R	R
	Marshall	R	R
	Monroe	1.7078	1.7008
	Montgomery	1.2953	1.1021
	Moultrie	1.5541	1.5424
	Ogle	0.7300	0.6737
	Peoria	R	R
	Perry	R	R
	Piatt	R	R

Appendix

Upper Midwest Order Reported Payroll Average Hauling Charges, By state and County, for May 2023

State	County	Simple Average Hauling Charges	Weighted Average Hauling Charges
		---------- (Dollars Per Cwt.) ----------	
Illinois *(continued)*	Pike	0.8271	0.8460
	Randolph	1.3934	1.5555
	Richland	0.9557	0.8236
	Rock Island	0.9698	0.7560
	St. Clair	R	R
	Shelby	R	R
	Stephenson	0.7080	0.6050
	Tazewell	R	R
	Washington	1.3022	1.4395
	Wayne	R	R
	Whiteside	1.4067	1.0404
	Will	R	R
	Winnebago	1.0166	0.7743
Iowa	Allamakee	0.8918	0.7878
	Appanoose	R	R
	Benton	0.6600	1.1706
	Black Hawk	R	R
	Bremer	0.7992	0.4576
	Buchanan	1.1484	0.9162
	Butler	R	R
	Carroll	R	R
	Cedar	R	R
	Cerro Gordo	R	R
	Cherokee	R	R
	Chickasaw	1.0254	1.0776
	Clarke	R	R
	Clay	R	R
	Clayton	0.6701	0.4979
	Clinton	0.6308	0.4766
	Davis	0.8566	0.9395
	Decatur	R	R
	Delaware	0.8278	0.6357
	Des Moines	R	R
	Dubuque	0.8423	0.6671
	Fayette	0.7983	0.7512
	Floyd	1.1748	1.1931
	Franklin	R	R
	Hamilton	R	R
	Hancock	R	R

Appendix

Upper Midwest Order Reported Payroll Average Hauling Charges, By state and County, for May 2023

State	County	Simple Average Hauling Charges	Weighted Average Hauling Charges
		---------- (Dollars Per Cwt.) ----------	
Iowa *(continued)*	Hardin	R	R
	Howard	1.0369	0.7303
	Humboldt	R	R
	Ida	R	R
	Iowa	R	R
	Jackson	0.9639	0.7915
	Jasper	0.9982	0.7982
	Jefferson	R	R
	Johnson	1.3386	1.3464
	Jones	0.4713	0.4230
	Kossuth	R	R
	Lee	1.2527	1.2213
	Lyon	0.6095	0.4785
	Mahaska	0.4770	0.8748
	Marshall	R	R
	Mitchell	0.9460	0.8205
	Montgomery	R	R
	Muscatine	R	R
	O'Brien	0.9876	0.3482
	Osceola	0.4607	0.5448
	Palo Alto	R	R
	Plymouth	R	R
	Pocahontas	R	R
	Pottawattamie	R	R
	Poweshiek	0.7333	1.2778
	Sac	R	R
	Scott	1.1300	0.8675
	Shelby	R	R
	Sioux	0.4750	0.3474
	Story	R	R
	Tama	R	R
	Van Buren	1.4062	1.1827
	Story	R	R
	Tama	R	R
	Van Buren	1.1856	1.0970
	Wapello	0.5039	0.4834
	Warren	R	R
	Washington	R	R
	Wayne	1.0369	0.7303
	Winnebago	R	R

Appendix

Upper Midwest Order Reported Payroll Average Hauling Charges, By state and County, for May 2023

State	County	Simple Average Hauling Charges	Weighted Average Hauling Charges
		---------- (Dollars Per Cwt.) ----------	
Iowa *(continued)*	Winneshiek	0.8270	0.7965
	Woodbury	R	R
	Worth	1.7147	1.8106
Michigan	Dickinson	1.2802	1.2802
	Menominee	1.1412	0.6629
Minnesota	Aitkin	R	R
	Becker	0.3803	0.2038
	Beltrami	R	R
	Benton	0.4495	0.5084
	Blue Earth	0.4000	0.2873
	Brown	0.3849	0.3352
	Carlton	1.3033	0.8224
	Carver	0.3989	0.3102
	Cass	1.1362	0.9127
	Chippewa	R	R
	Chisago	0.5631	0.3347
	Clay	R	R
	Clearwater	R	R
	Cottonwood	1.6923	0.9544
	Crow Wing	0.9286	0.3529
	Dakota	0.5790	0.3097
	Dodge	0.4949	0.2344
	Douglas	0.4652	0.2783
	Faribault	0.7093	0.7628
	Fillmore	0.9475	0.7932
	Freeborn	0.5003	0.2775
	Goodhue	0.4108	0.3307
	Grant	0.2108	0.0120
	Hennepin	0.2520	0.2134
	Houston	0.8117	0.7552
	Hubbard	R	R
	Isanti	0.3030	0.1899
	Jackson	R	R
	Kanabec	1.4131	1.1603
	Kandiyohi	0.3248	0.4022
	Lac qui Parle	R	R
	Le Sueur	0.4775	0.4413
	Lincoln	0.4522	0.1696

Appendix

Upper Midwest Order Reported Payroll Average Hauling Charges, By state and County, for May 2023

State	County	Simple Average Hauling Charges	Weighted Average Hauling Charges
		---------- (Dollars Per Cwt.) ----------	
Minnesota *(continued)*	Lyon	0.5302	0.5761
	McLeod	0.4953	0.1824
	Mahnomen	0.5965	0.2380
	Marshall	2.3089	1.5972
	Martin	R	R
	Meeker	0.4372	0.4697
	Mille Lacs	0.6669	0.4547
	Morrison	0.4772	0.4205
	Mower	0.8610	0.5418
	Murray	0.8490	0.7487
	Nicollet	0.3314	0.2928
	Nobles	0.6164	0.5280
	Norman	0.6052	0.1209
	Olmsted	0.5313	0.4004
	Otter Tail	0.5206	0.2573
	Pennington	R	R
	Pine	0.5929	0.3368
	Pipestone	0.8252	0.9230
	Polk	1.4329	0.8170
	Pope	0.8224	0.3638
	Ramsey	R	R
	Redwood	1.3339	1.2652
	Renville	0.3987	0.3029
	Rice	0.3219	0.2204
	Rock	0.5984	0.6295
	Roseau	1.6604	0.8739
	St. Louis	1.8564	1.7619
	Scott	0.7517	0.5430
	Sherburne	0.3705	0.3474
	Sibley	0.5166	0.3691
	Stearns	0.6502	0.1885
	Steele	0.4473	0.3258
	Stevens	0.3654	0.2900
	Swift	0.4142	0.1742
	Todd	0.2606	0.4570
	Traverse	0.5303	0.4511
	Wabasha	R	R
	Wadena	0.3173	0.1617
	Waseca	0.5109	0.3993
	Washington	0.7395	0.7008

Appendix

Upper Midwest Order Reported Payroll Average Hauling Charges, By state and County, for May 2023

State	County	Simple Average Hauling Charges	Weighted Average Hauling Charges
		---------- (Dollars Per Cwt.) ----------	
Minnesota *(continued)*	Watonwan	R	R
	Winona	0.4064	0.3837
	Wright	0.4993	0.3357
	Yellow Medicine	0.5368	0.5224
North Dakota	Barnes	R	R
	Cass	R	R
	Emmons	R	R
	Foster	R	R
	Grant	R	R
	Hettinger	R	R
	Kidder	R	R
	La Moure	R	R
	Logan	0.9645	0.9804
	McHenry	R	R
	McIntosh	R	R
	Morton	R	R
	Nelson	R	R
	Ransom	R	R
	Richland	R	R
	Sargent	R	R
	Stark	R	R
	Stutsman	1.2795	1.3213
South Dakota	Beadle	R	R
	Bon Homme	0.7989	0.7820
	Brookings	0.6646	0.3525
	Brown	R	R
	Brule	R	R
	Campbell	R	R
	Charles Mix	1.2279	1.1349
	Clark	R	R
	Codington	0.6147	0.4059
	Davison	2.1357	1.4092
	Day	0.6694	0.3260
	Deuel	0.5605	0.2095
	Douglas	R	R
	Edmunds	R	R
	Faulk	R	R
	Grant	0.2917	0.1777

Appendix

Upper Midwest Order Reported Payroll Average Hauling Charges, By state and County, for May 2023

State	County	Simple Average Hauling Charges	Weighted Average Hauling Charges
		---------- (Dollars Per Cwt.) ----------	
South Dakota *(continued)*	Gregory	R	R
	Hamlin	0.5154	0.1399
	Hand	R	R
	Hanson	R	R
	Hutchinson	0.8513	0.3596
	Kingsbury	0.8710	0.7795
	Lake	0.6204	0.6313
	Lincoln	0.9084	0.9305
	McCook	0.6210	0.8375
	McPherson	R	R
	Marshall	R	R
	Minnehaha	0.9166	0.6470
	Moody	0.5236	0.1340
	Roberts	R	R
	Spink	R	R
	Turner	0.7455	0.7923
	Union	R	R
	Yankton	R	R
Wisconsin	Adams	1.0378	0.0165
	Ashland	1.0615	0.5980
	Barron	0.7204	0.2288
	Bayfield	1.0040	0.7780
	Brown	0.5604	0.3586
	Buffalo	0.4806	0.2724
	Burnett	0.7984	0.3087
	Calumet	0.4760	0.4642
	Chippewa	0.5099	0.3299
	Clark	0.3626	0.2598
	Columbia	0.7354	0.4999
	Crawford	0.8063	0.5586
	Dane	0.6179	0.4065
	Dodge	0.6109	0.5400
	Door	0.5327	0.2663
	Douglas	0.8222	0.7786
	Dunn	0.5096	0.4225
	Eau Claire	0.5605	0.2692
	Florence	R	R
	Fond du Lac	0.4532	0.4640
	Grant	0.6046	0.5083

Appendix

Upper Midwest Order Reported Payroll Average Hauling Charges, By state and County, for May 2023

State	County	Simple Average Hauling Charges	Weighted Average Hauling Charges
		---------- (Dollars Per Cwt.) ----------	
Wisconsin *(continued)*	Green	0.4732	0.2967
	Green Lake	0.6467	0.6318
	Iowa	0.6023	0.4925
	Iron	1.1592	0.2003
	Jackson	0.4082	0.2419
	Jefferson	0.6483	0.4530
	Juneau	1.1452	0.8664
	Kenosha	1.4094	1.3085
	Kewaunee	0.4848	0.1527
	La Crosse	0.5201	0.4001
	LaFayette	0.4759	0.3808
	Langlade	0.6248	0.5007
	Lincoln	0.5876	0.7182
	Manitowoc	0.4932	0.3310
	Marathon	0.4245	0.2722
	Marinette	0.5345	0.4554
	Marquette	0.6155	0.7068
	Monroe	0.8332	0.8321
	Oconto	0.5834	0.3609
	Outagamie	0.6413	0.2584
	Ozaukee	0.4545	0.1993
	Pepin	0.3415	0.2490
	Pierce	0.3669	0.2910
	Polk	0.7600	0.3867
	Portage	0.5791	0.2790
	Price	1.1138	0.4088
	Racine	1.3588	1.3053
	Richland	0.8625	0.6119
	Rock	0.5571	0.3848
	Rusk	1.1607	0.7309
	St. Croix	0.4245	0.2748
	Sauk	0.8621	0.6551
	Sawyer	0.9577	0.9108
	Shawano	0.6547	0.4969
	Sheboygan	0.4376	0.3915
	Taylor	0.5509	0.3761
	Trempealeau	0.5744	0.3271
	Vernon	0.6857	0.6320
	Walworth	0.7935	0.5176
	Washburn	1.4347	0.3604

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Upper Midwest Order Reported Payroll Average Hauling Charges, By state and County, for May 2023

State	County	Simple Average Hauling Charges	Weighted Average Hauling Charges
		---------- *(Dollars Per Cwt.)* ----------	
Wisconsin *(continued)*	Washington	0.4587	0.3595
	Waukesha	0.9422	0.8085
	Waupaca	0.5757	0.3840
	Waushara	0.4089	0.1281
	Winnebago	0.6828	0.3515
	Wood	0.3142	0.1453

R = Restricted data, counties with fewer than 3 producers delivering to the market.