MILK HAULING CHARGES IN THE UPPER MIDWEST MARKETING AREA

MAY 2017

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Introduction

This study breaks down and categorizes hauling charges based on state, county, and producer size groups for May 2017. The payroll data for producers who were associated with the Upper Midwest Marketing Order were examined. For 2017, 12,109 dairy producers were associated with the market[2]. Two events led to this staff paper being issued later than usual. The first is the implementation of a new producer database by Federal Order 30. The second was a change in some instances how handlers charge farmers for hauling expenses. Variations on a line item fee for hauling can include but aren't limited to stop charges, fuel charges, or a flat fee. Some handlers will do a combination of charges necessitating the researcher to sum the charges to arrive at a total charge.

Table 1

Average Hauling Charges for the Marketing Area for May

Statistic	2017	2016
Producer Deliveries (pounds)	4,015,919,442	4,011,759,764
Total Hauling Charges ($)	$8,048,416.98	$6,888,641.72
Weighted Average Charges ($/cwt.)	0.2004	0.1717

Flat fee structure leads to a decreasing average hauling charge when 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 his own milk. Previous analysis has indicated that hauling charges are a function of producer pounds, the

[1] Corey Freije is an Agricultural Economist with the Market Administrator's Office, Minneapolis, Minnesota. Assisting Dr. Freije was Rachel M. Benecke of the Upper Midwest Market Administrator's office.

[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 2017 of $0.3409 per cwt., compared to $0.3263 for 2016. 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 producer and state.

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.

Analysis by Size Group

Table 2 presents the simple average hauling charges, total hauling charges, production, number of farms, producer average monthly delivery, and weighted average hauling charges for each of ten size groups. Skewness dominates the results in Table 2, with 60% of the milk produced by 10% of the farms. In addition, these largest categories of farms pay 50% of the total hauling charges. Chart 2, 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 2017

Size	Simple Average Hauling Charges	Total Hauling Charges	Production	Number of Farms	Producer Average Monthly Delivery	Weighted Average Hauling Charges
	($/cwt.)	($)	(pounds)		(pounds)	($/cwt.)
Up to 49,999	$0.6387	$374,586.92	69,690,151	2,211	31,520	$0.5375
50,000 to 99,999	$0.3315	$738,606.56	227,182,349	3,064	74,146	$0.3251
100,000 to 249,999	$0.2580	$1,510,286.26	594,020,651	3,869	153,533	$0.2542
250,000 to 399,999	$0.2219	$720,466.01	327,933,800	1,051	312,021	$0.2197
400,000 to 599,999	$0.1997	$580,051.98	289,173,753	595	486,006	$0.2006
600,000 to 999,999	$0.1754	$676,273.61	386,237,824	502	769,398	$0.1751
1,000,000 to 1,499,999	$0.1782	$664,016.55	370,723,655	306	1,211,515	$0.1791
1,500,000 to 2,499,999	$0.1790	$847,001.78	479,944,261	250	1,919,777	$0.1765
2,500,000 to 4,999,999	$0.1320	$726,833.80	543,936,120	166	3,276,724	$0.1336
5,000,000 or more	$0.1855	$1,210,293.51	727,076,878	95	7,653,441	$0.1665
Total	**$0.3308**	**$8,048,416.98**	**4,015,919,442**	**12,109**	**331,647**	**$0.2004**

Analysis by State

Table 3 presents the simple average hauling charges, total hauling charges, production, number of farms, producer average monthly delivery, and weighted average hauling charges for each state comprising the order. Analyzing hauling charges by state has previously led Federal Order 30 staff to hypothesize that non-scale factors such as distance to plants and population centers, and competition among handlers along with the predominance of dairying in a market affect hauling charges. These factors have been tested and their relevance supported in earlier papers.

Table 3

Average Producer Delivery by State for May 2017

State	Simple Average Hauling Charges	Total Hauling Charges	Production	Number of Farms	Producer Average Monthly Delivery	Weighted Average Hauling Charges
	($/cwt.)	($)	(pounds)		(pounds)	($)
Illinois	$0.5108	$188,514.10	62,663,749	254	246,708	$0.3008
Iowa	$0.5130	$1,142,184.77	344,486,492	816	422,165	$0.3316
Michigan UP	$0.2974	$36,327.60	22,910,730	35	654,592	$0.1586
Minnesota	$0.3767	$1,709,099.54	839,386,625	2,927	286,774	$0.2036
North Dakota	$1.0199	$119,221.71	26,243,081	53	495,152	$0.4543
South Dakota	$0.5178	$550,584.18	194,555,115	145	1,341,759	$0.2830
Wisconsin	$0.2811	$4,302,485.08	2,525,673,650	7,879	320,558	$0.1704
Total	**$0.3308**	**$8,048,416.98**	**4,015,919,442**	**12,109**	**331.647**	**$0.2004**

As Table 3 indicates, North Dakota has the highest average hauling charge with a low number of farms, the longest distance from high demand areas, and less handler competition. Wisconsin in contrast has a low average hauling charge with a high number of farms and close proximity to high demand areas. A topic of interest is how the average pounds in this table 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 the average hauling charges. Both levels are above historical averages, with the hauling charges showing less fluctuation and a dampened overall increase to the more volatile fuel price. That volatility is evident in the large positive and negative percentage change values in fuel. In contrast, the percentage change in the average hauling charge is 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 Fuel Retail Price and Average Hauling Charges[3]

Year	May Fuel Price	% Change from Previous Year	May Average Hauling Charges	% Change from Previous Year
	($/gallon)	(%)	($/cwt)	(%)
2008	4.382	58.60%	$0.2774	10.96%
2009	2.170	-50.48%	$0.2984	7.57%
2010	3.038	40.00%	$0.3029	1.51%
2011	4.001	31.70%	$0.3007	-0.73%
2012	3.877	-3.10%	$0.3328	10.68%
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%

Chart 1 shows that over 80% of the milk delivered on Federal Order 30 was from Wisconsin and Minnesota, the other states on the order each had less than 10% of the delivered milk. This predominance for Wisconsin and Minnesota indicates that their weighted averages will pull the overall average for the order down relative to North and South 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 shows the milk production percentage for each size class and also the percentage of total hauling charges paid by each size class. For the first four size classes the percentage of hauling charges is greater than their percentage of total production. For the latter six classes their percentage of hauling charges is smaller than their percentage of production. The commonly accepted 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 8, builds on

[3] The hauling charges presented are a simple average by state that is then 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.

Chart 2's distribution to show that the average hauling charges and the average milk production are inversely related.

Percentage of Milk Deliveries by State

In May 2017, dairy producers from three states delivered the majority of the milk associated with the Upper Midwest Order. Wisconsin producers delivered the most milk of any of the states, by supplying 62.89 percent of the total milk volume associated with the market. Producers from Minnesota and Iowa were second and third in milk volume supplied to the order, respectively.

Chart 1

Percent of Delivery Volume by State for May 2017

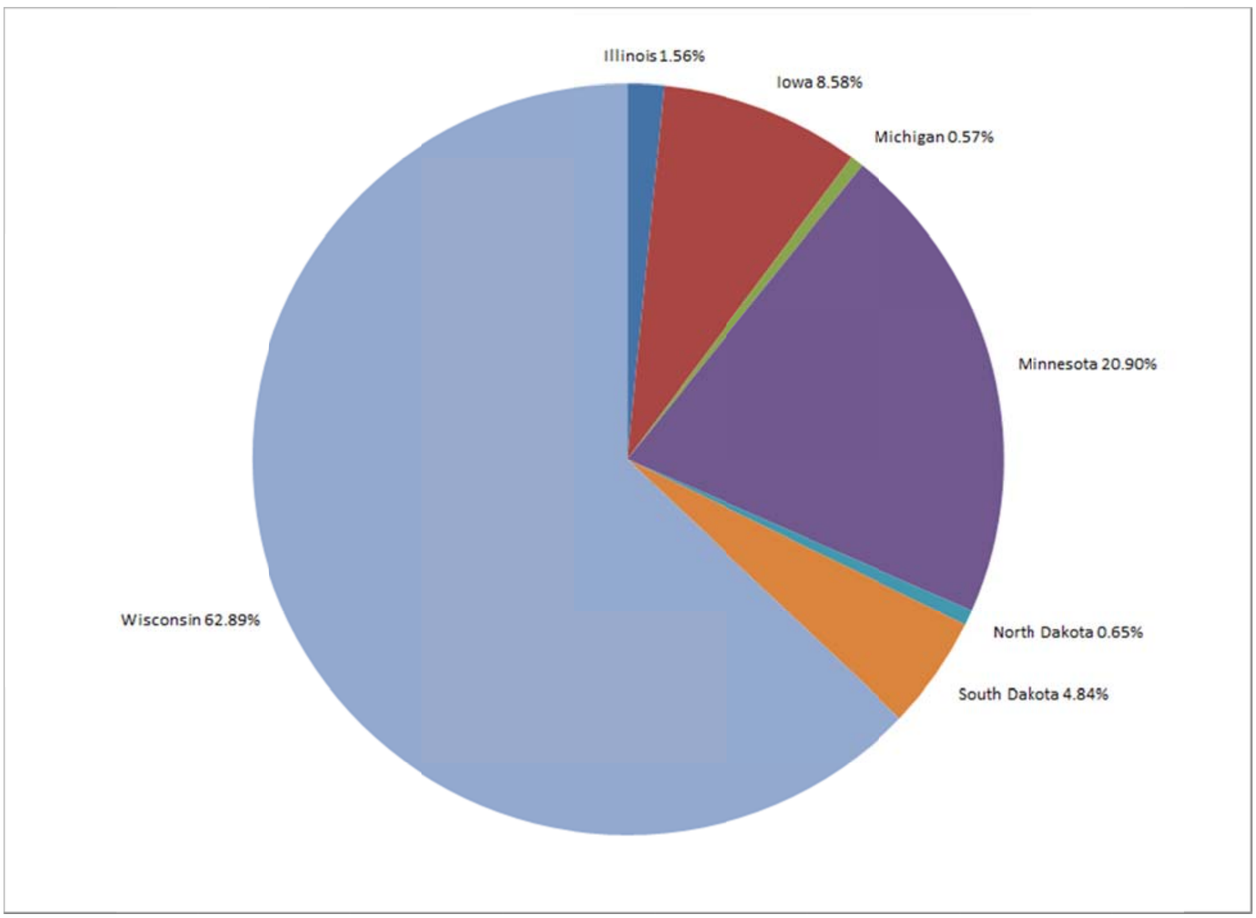
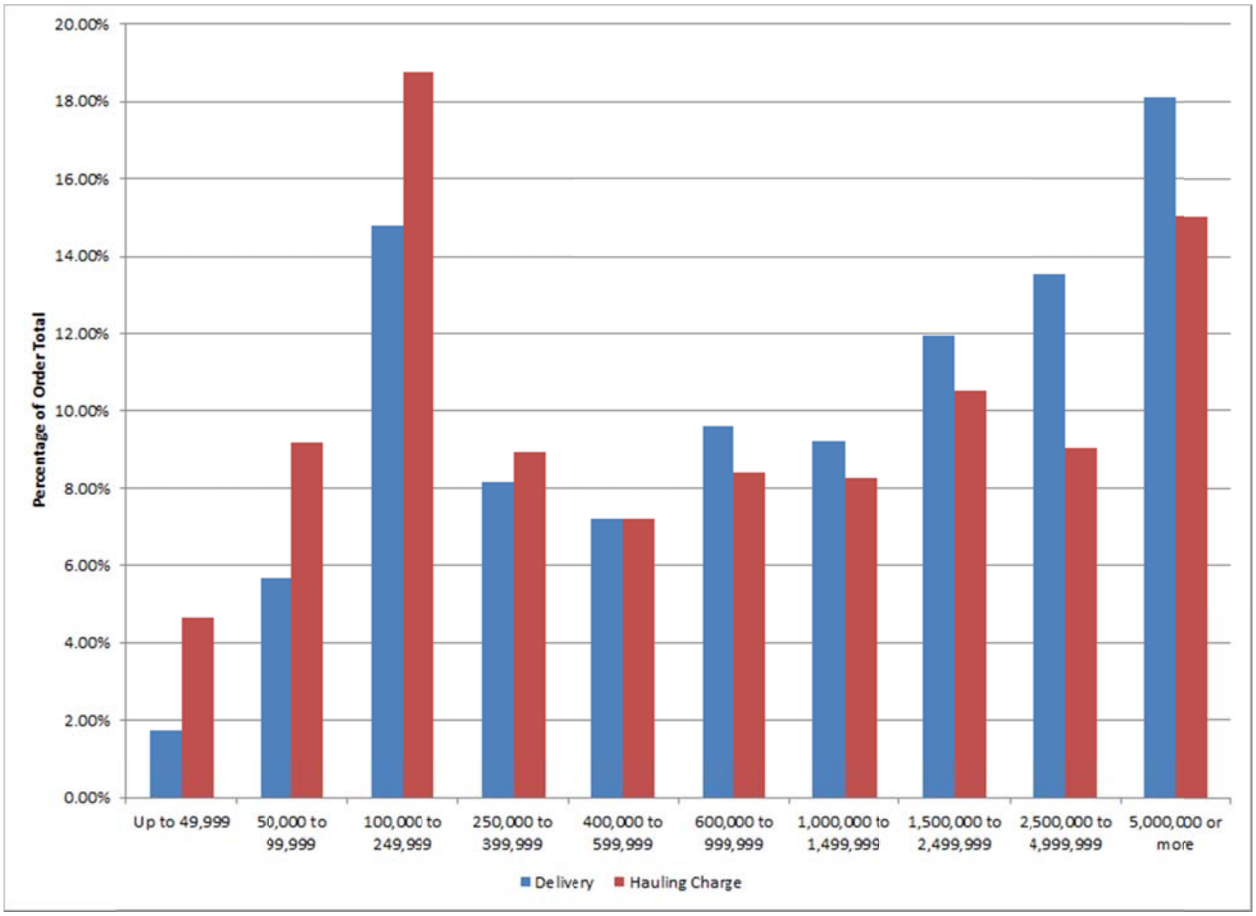


Chart 2

Percent of Hauling Charges and Producer Delivery for May 2017



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 herd size or milk volume influences the producer's cost of hauling.

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

Table 5

Average Hauling Charges, by Size Range and State, for May 2017 ($ per cwt.)

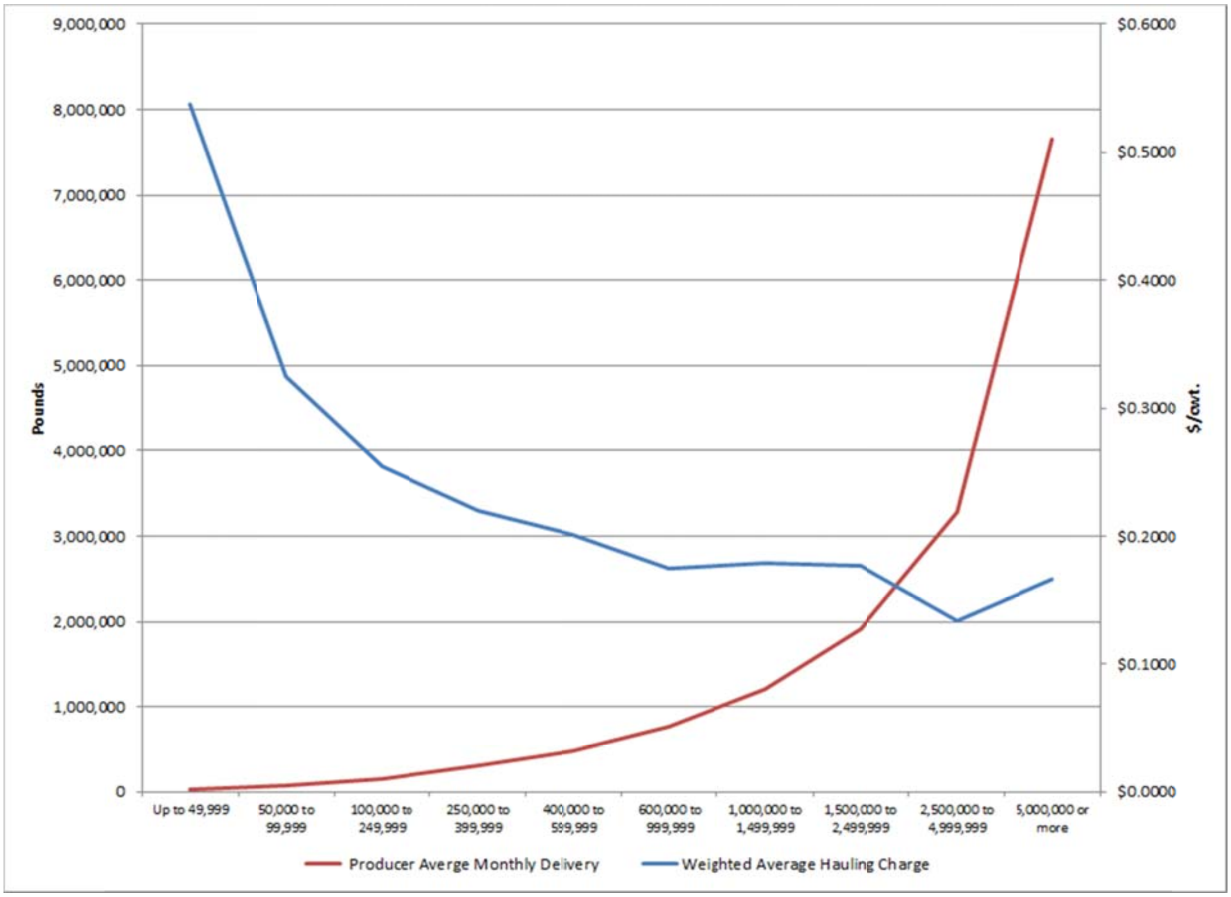
Size	Illinois	Iowa	Michigan	Minnesota	North Dakota	South Dakota	Wisconsin	Average
Up to 49,999	$0.8839	$0.7975		$0.6063	$1.5492	$0.9875	$0.4594	$0.5375
50,000 to 99,999	$0.4460	$0.5105	R	$0.3909	$1.2036	$0.7150	$0.2725	$0.3251
100,000 to 249,999	$0.4478	$0.4104	$0.4288	$0.3014	$0.7918	$0.5239	$0.2030	$0.2542
250,000 to 399,999	$0.3456	$0.3646	$0.2554	$0.2168	$1.1281	$0.4561	$0.1869	$0.2197
400,000 to 599,999	$0.3116	$0.3064	$0.2187	$0.1761	R	$0.4013	$0.1835	$0.2006
600,000 to 999,999	$0.1888	$0.3602	$0.1006	$0.1497	$1.0250	$0.3390	$0.1515	$0.1751
1,000,000 to 1,499,999	$0.1235	$0.2827	R	$0.1475		$0.3150	$0.1765	$0.1791
1,500,000 to 2,499,999	$0.2309	$0.3085	R	$0.1527	$0.3065	$0.2793	$0.1625	$0.1765
2,500,000 to 4,999,999	R	$0.3700		$0.1079	R	$0.2067	$0.1108	$0.1336
5,000,000 or more		$0.2604	R	$0.1405		$0.2674	$0.1138	$0.1665
Average	**$0.3008**	**$0.3316**	**$0.1586**	**$0.2036**	**$0.4543**	**$0.2830**	**$0.1704**	**$0.2004**

R = Restricted, fewer than three 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 herd size range, is that many Upper Midwest handlers charge a fixed hauling dollar value to dairy producers, regardless of volume of milk the particular producer is marketing. Therefore, as one of these producer's 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 83.9 percent 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 generally located within the vicinity of multiple milk processors. Therefore, these producers will apparently pay for shorter hauling distances, and therefore their hauling charges on a per hundredweight basis 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 2017.

Chart 3

Producer Delivery versus Average Hauling Charges for May 2017



As mentioned above, one factor that contributes to varying hauling rate charges is the dairy producer's location to 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.

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 North Dakota. 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 semi-remote areas are geographically more spread-out 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 his or her 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 semi-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.

Analysis of Zero Milk Hauling Charges Producers

A small percentage of producers on Federal Order 30 have a zero hauling charge 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 isn't reflected in the payroll records.

Table 6

Producers with Zero Hauling Charges by Size Range for May 2017

Size	Production	Number of Farms	Producer Average Monthly Delivery
	(pounds)		(pounds)
Up to 49,999	4,470,588	139	32,163
50,000 to 99,999	10,141,327	141	71,924
100,000 to 249,999	21,208,251	138	153,683
250,000 to 399,999	10,895,679	34	320,461
400,000 to 599,999	11,304,300	23	491,491
600,000 to 999,999	37,066,523	46	805,794
1,000,000 to 1,499,999	60,304,822	49	1,230,711
1,500,000 to 2,499,999	89,655,829	45	1,992,352
2,500,000 to 4,999,999	174,421,744	52	3,354,264
5,000,000 or more	260,608,906	33	7,897,240
Total	**680,077,969**	**700**	**971,540**

Table 7

Producers with Zero Hauling Charges by State for May 2017

State	Production	Number of Farms	Producer Average Monthly Delivery
	(pounds)		(pounds)
Illinois	12,156,084	31	392,132
Iowa	45,485,484	21	2,165,975
Minnesota	26,604,847	47	566,061
North Dakota & Wisconsin	595,831,554	601	991,400
Total	**680,077,969**	**700**	**971,540**

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. As Table 9 indicates, for South Dakota, production pounds are equal to production without zeros. Table 9 indicates that there are no zero hauling charges for May 2017 for South Dakota, thus the State was omitted from Table 7. 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.

Effects of Zero Hauling Charges on Order-Wide Data

The dairy farms producing milk for which there is no deduction on the payroll accounted for 680,077,969 pounds in 2017. 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 zero hauling charge dairy farms. This recalculation is $8,053,375.18/3,333,660,313*100 which equals $0.2416. The weighted average hauling charges per hundredweight increases from $0.2004 to $0.2416. Tables 8 and 9 repeat this procedure for the weighted average hauling charges by scale and by state using data from Tables 6 and 7.

Table 8

Average Hauling Charges, by Size, with Zero Charges Removed for May 2017

Size	Total Hauling Charges	Production	Production Without Zeros	Weighted Charges Without Zeros
	($)	(pounds)	(pounds)	($/cwt.)
Up to 49,999	$374,586.92	69,690,151	65,219,563	$0.5743
50,000 to 99,999	$738,606.56	227,182,349	217,041,022	$0.3403
100,000 to 249,999	$1,510,286.26	594,020,651	572,812,400	$0.2637
250,000 to 399,999	$720,466.01	327,933,800	317,038,121	$0.2272
400,000 to 599,999	$580,051.98	289,173,753	277,869,453	$0.2087
600,000 to 999,999	$676,273.61	386,237,824	349,171,301	$0.1937
1,000,000 to 1,499,999	$664,016.55	370,723,655	310,418,833	$0.2139
1,500,000 to 2,499,999	$851,959.98	479,944,261	388,107,272	$0.2195
2,500,000 to 4,999,999	$726,833.80	543,936,120	369,514,376	$0.1967
5,000,000 or more	$1,210,293.51	727,076,878	466,467,972	$0.2595
Total	**$8,053,375.18**	**4,015,919,442**	**3,333,660,313**	**$0.2416**

Table 9

Average Hauling Charges, by State, with Zero Charges Removed for May 2017

State	Total Hauling Charges	Production	Production Without Zeros	Weighted Charges Without Zeros
	($)	(pounds)	(pounds)	($/cwt.)
Illinois	$188,514.10	62,663,749	50,507,665	$0.3732
Iowa	$1,142,184.77	344,486,492	299,001,008	$0.3820
Michigan UP	$36,327.60	22,910,730	22,910,730	$0.1586
Minnesota	$1,709,099.54	839,386,625	812,781,778	$0.2103
South Dakota	$550,584.18	194,555,115	194,555,115	$0.2830
North Dakota & Wisconsin	$4,426,664.99	2,551,916,731	1,953,904,017	$0.2266
Total	**$8,053,375.18**	**4,015,919,442**	**3,333,660,313**	**$0.2416**

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 farm operations, combined with an adequate supply of milk procuring handlers.

This study revealed that a majority of handlers participating in the Upper Midwest Marketing Area 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 cost 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 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 the Dakotas and the U.P. of Michigan and distant counties in Minnesota and Wisconsin. Lastly, the weighted average hauling charges for Federal Order 30 shows 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 2017

State	County	Simple Average Hauling Charges	Weighted Average Hauling Charges
		-------------- (Dollars Per Cwt.) --------------	
Illinois	Adams	R	R
	Bond	R	R
	Boone	$0.50	$0.27
	Brown	R	R
	Carroll	$0.41	$0.12
	Clinton	$1.09	$0.68
	De Kalb	$0.49	$0.31
	Douglas	$0.72	$0.67
	Henderson	R	R
	Jo Daviess	$0.37	$0.22
	Kane	$0.42	$0.48
	Kankakee	R	R
	Lake	R	R
	Lee	R	R
	McHenry	$0.27	$0.32
	Ogle	$0.75	$0.55
	Peoria	R	R
	Pike	R	R
	Rock Island	$0.25	$0.09
	Stephenson	$0.41	$0.24
	Washington	R	R
	Whiteside	$1.18	$0.56
	Will	$2.47	$1.30
	Winnebago	$0.63	$0.57
Iowa	Allamakee	$0.60	$0.30
	Appanoose	R	R
	Benton	$0.26	$0.31
	Bremer	$0.60	$0.57
	Buchanan	$0.66	$0.51
	Butler	$0.60	$0.36
	Cedar	$0.53	$0.21
	Cerro Gordo	R	R
	Cherokee	$0.93	$0.89
	Chickasaw	$0.51	$0.34
	Clay	R	R
	Clayton	$0.50	$0.38
	Clinton	$0.88	$0.41
	Crawford	R	R
	Davis	$0.48	$0.24
	Decatur	R	R

Appendix

Upper Midwest Order Reported Payroll Average Hauling Charges, by State and County for May 2017

State	County	Simple Average Hauling Charges	Weighted Average Hauling Charges
		-------------- (Dollars Per Cwt.)	-------------
Iowa (continued)	Delaware	$0.51	$0.48
	Des Moines	R	R
	Dickinson	R	R
	Dubuque	$0.36	$0.26
	Emmet	R	R
	Fayette	$0.33	$0.24
	Floyd	$0.31	$0.30
	Franklin	R	R
	Grundy	R	R
	Hancock	R	R
	Hardin	$1.20	$1.16
	Henry	$1.46	$1.40
	Howard	$0.36	$0.31
	Humboldt	R	R
	Ida	R	R
	Jackson	$0.43	$0.25
	Jasper	$1.26	$0.71
	Johnson	$0.76	$0.71
	Jones	$0.29	$0.37
	Keokuk	R	R
	Kossuth	$1.32	$0.57
	Linn	$0.49	$0.16
	Louisa	R	R
	Lucas	R	R
	Lyon	$0.39	$0.17
	Mahaska	$0.66	$0.72
	Marion	$0.69	$0.41
	Marshall	R	R
	Mitchell	$0.44	$0.38
	Monroe	R	R
	O'Brien	$0.13	$0.09
	Osceola	$0.58	$0.87
	Palo Alto	$0.85	$0.78
	Plymouth	R	R
	Pocahontas	$0.56	$0.15
	Polk	R	R
	Poweshiek	$0.58	$0.93
	Sac	R	R
	Scott	$1.04	$0.71
	Sioux	$0.38	$0.27
	Story	$1.07	$1.13
	Tama	$1.92	$1.32

Appendix

Upper Midwest Order Reported Payroll Average Hauling Charges, by State and County for May 2017

State	County	Simple Average Hauling Charges	Weighted Average Hauling Charges
		(Dollars Per Cwt.)	
Iowa (continued)	Van Buren	$0.87	$0.45
	Warren	$0.71	$0.68
	Washington	$0.55	$0.42
	Wayne	$0.61	$0.49
	Winnebago	$1.11	$0.97
	Winneshiek	$0.40	$0.29
	Woodbury	R	R
	Worth	$1.13	$1.13
Michigan	Delta	$0.37	$0.30
	Dickinson	$0.18	$0.13
	Marquette	R	R
	Menominee	$0.31	$0.16
Minnesota	Aitkin	$0.69	$0.68
	Anoka	R	R
	Becker	$0.50	$0.17
	Beltrami	$0.64	$0.46
	Benton	$0.33	$0.19
	Blue Earth	$0.65	$0.42
	Brown	$0.37	$0.25
	Carlton	$0.58	$0.44
	Carver	$0.33	$0.25
	Cass	$0.66	$0.48
	Chippewa	$0.34	$0.28
	Chisago	$0.25	$0.19
	Clay	$0.30	$0.16
	Clearwater	$1.57	$0.45
	Cottonwood	$1.13	$0.57
	Crow Wing	$0.34	$0.23
	Dakota	$0.58	$0.27
	Dodge	$0.31	$0.16
	Douglas	$0.41	$0.28
	Faribault	$0.39	$0.16
	Fillmore	$0.44	$0.24
	Freeborn	$0.53	$0.21
	Goodhue	$0.35	$0.23
	Grant	R	R
	Hennepin	$0.30	$0.25
	Houston	$0.48	$0.26
	Hubbard	$0.50	$0.28
	Isanti	$0.78	$0.12

Appendix

Upper Midwest Order Reported Payroll Average Hauling Charges, by State and County for May 2017

State	County	Simple Average Hauling Charges	Weighted Average Hauling Charges
		--------------- (Dollars Per Cwt.)	--------------
Minnesota (continued)			
	Jackson	R	R
	Kanabec	$0.48	$0.24
	Kandiyohi	$0.39	$0.15
	Koochiching	$0.75	$0.52
	Lac Qui Parle	$0.24	$0.12
	Le Sueur	$0.43	$0.36
	Lincoln	$0.47	$0.36
	Lyon	$0.52	$0.51
	Mahnomen	$0.31	$0.12
	Marshall	$0.60	$0.34
	Martin	$0.68	$0.67
	McLeod	$0.38	$0.20
	Meeker	$0.31	$0.12
	Mille Lacs	$0.42	$0.24
	Morrison	$0.37	$0.15
	Mower	$0.47	$0.26
	Murray	$0.38	$0.26
	Nicollet	$0.41	$0.33
	Nobles	$0.42	$0.35
	Norman	$0.83	$0.04
	Olmsted	$0.38	$0.22
	Otter Tail	$0.36	$0.21
	Pennington	R	R
	Pine	$0.41	$0.21
	Pipestone	$0.39	$0.53
	Polk	$1.04	$0.49
	Pope	$0.34	$0.16
	Ramsey	R	R
	Red Lake	$0.31	$0.17
	Redwood	$0.41	$0.31
	Renville	$0.38	$0.13
	Rice	$0.51	$0.38
	Rock	$0.40	$0.18
	Roseau	$0.66	$0.49
	Scott	$0.33	$0.29
	Sherburne	$0.28	$0.15
	Sibley	$0.36	$0.17
	St. Louis	$0.41	$0.19
	Stearns	$0.32	$0.18
	Steele	$0.37	$0.31
	Stevens	$0.19	$0.07

Appendix

Upper Midwest Order Reported Payroll Average Hauling Charges, by State and County for May 2017

State	County	Simple Average Hauling Charges	Weighted Average Hauling Charges
		(Dollars Per Cwt.)	
Minnesota (continued)			
	Swift	$0.32	$0.09
	Todd	$0.40	$0.21
	Traverse	R	R
	Wabasha	$0.27	$0.15
	Wadena	$0.35	$0.24
	Waseca	$0.44	$0.30
	Washington	$0.37	$0.26
	Watonwan	$0.30	$0.20
	Winona	$0.30	$0.19
	Wright	$0.33	$0.16
	Yellow Medicine	$0.40	$0.45
North Dakota	Barnes	$1.14	$0.19
	Burleigh	R	R
	Cass	R	R
	Emmons	$0.92	$0.81
	Foster	R	R
	Grant	R	R
	Hettinger	R	R
	Kidder	R	R
	La Moure	$0.95	$0.99
	Logan	R	R
	McHenry	R	R
	McIntosh	$0.83	$0.32
	Morton	$1.36	$0.82
	Nelson	R	R
	Ransom	R	R
	Richland	R	R
	Sargent	R	R
	Stark	$1.21	$0.93
	Stutsman	$0.97	$0.79
	Walsh	R	R
South Dakota	Beadle	$0.92	$0.63
	Brookings	$0.43	$0.29
	Brown	$0.75	$0.17
	Campbell	R	R
	Clark	R	R
	Codington	$0.48	$0.23
	Davison	R	R
	Day	$0.76	$0.37

Appendix

Upper Midwest Order Reported Payroll Average Hauling Charges, by State and County for May 2017

State	County	Simple Average Hauling Charges	Weighted Average Hauling Charges
		-------------- (Dollars Per Cwt.) -------------	
South Dakota	Deuel	$0.58	$0.22
	Edmunds	R	R
	Faulk	R	R
	Grant	$0.27	$0.13
	Hamlin	$0.49	$0.23
	Hand	R	R
	Hanson	R	R
	Kingsbury	$0.49	$0.44
	Lake	$0.44	$0.47
	Lincoln	R	R
	Marshall	$0.31	$0.18
	McCook	$0.59	$0.89
	McPherson	R	R
	Minnehaha	$0.47	$0.56
	Moody	$0.52	$0.38
	Roberts	$0.48	$0.18
	Sanborn	R	R
	Spink	R	R
	Turner	$0.58	0.04
Wisconsin	Adams	$0.24	$0.11
	Ashland	$0.43	$0.12
	Barron	$0.41	$0.16
	Bayfield	$0.48	$0.38
	Brown	$0.26	$0.14
	Buffalo	$0.26	$0.10
	Burnett	$0.29	$0.16
	Calumet	$0.26	$0.26
	Chippewa	$0.23	$0.11
	Clark	$0.17	$0.09
	Columbia	$0.36	$0.26
	Crawford	$0.56	$0.39
	Dane	$0.33	$0.31
	Dodge	$0.37	$0.25
	Door	$0.38	$0.16
	Douglas	$0.51	$0.39
	Dunn	$0.32	$0.08
	Eau Claire	$0.31	$0.14
	Florence	$1.12	$0.37
	Fond du Lac	$0.26	$0.11
	Forest	R	R
	Grant	$0.31	$0.23

Appendix

Upper Midwest Order Reported Payroll Average Hauling Charges, by State and County for May 2017

State	County	Simple Average Hauling Charges	Weighted Average Hauling Charges
		-------------- (Dollars Per Cwt.) --------------	
Wisconsin (continued)			
	Green	$0.27	$0.21
	Green Lake	$0.32	$0.12
	Iowa	$0.27	$0.22
	Iron	$0.56	$0.53
	Jackson	$0.27	$0.14
	Jefferson	$0.36	$0.20
	Juneau	$0.29	$0.32
	Kenosha	$0.49	$0.45
	Kewaunee	$0.29	$0.09
	La Crosse	$0.42	$0.17
	Lafayette	$0.25	$0.21
	Langlade	$0.21	$0.21
	Lincoln	$0.20	$0.10
	Manitowoc	$0.32	$0.20
	Marathon	$0.17	$0.08
	Marinette	$0.39	$0.29
	Marquette	$0.27	$0.20
	Milwaukee	R	R
	Monroe	$0.35	$0.23
	Oconto	$0.26	$0.14
	Oneida	R	R
	Outagamie	$0.22	$0.08
	Ozaukee	$0.18	$0.08
	Pepin	$0.17	$0.07
	Pierce	$0.30	$0.22
	Polk	$0.37	$0.17
	Portage	$0.21	$0.07
	Price	$0.39	$0.08
	Racine	$0.51	$0.30
	Richland	$0.47	$0.28
	Rock	$0.32	$0.16
	Rusk	$0.37	$0.15
	Sauk	$0.36	$0.31
	Sawyer	$0.35	$0.06
	Shawano	$0.26	$0.15
	Sheboygan	$0.22	$0.25
	St. Croix	$0.26	$0.14
	Taylor	$0.18	$0.09
	Trempealeau	$0.28	$0.09
	Vernon	$0.40	$0.32
	Walworth	$0.36	$0.22

Appendix

Upper Midwest Order Reported Payroll Average Hauling Charges, by State and County for May 2017

State	County	Simple Average Hauling Charges	Weighted Average Hauling Charges
		--------------- (Dollars Per Cwt.)	--------------
Wisconsin (continued)			
	Washburn	$0.32	$0.09
	Washington	$0.24	$0.18
	Waukesha	$0.56	$0.43
	Waupaca	$0.23	$0.15
	Waushara	$0.26	$0.09
	Winnebago	$0.25	$0.11
	Wood	$0.20	$0.09

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