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Landed Costs of Grain to Mexico Fell in Second Quarter 2023

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Mexico is a major importer of U.S. grain. Low transportation and landed costs for U.S.-Mexico routes are vital to the competitiveness of U.S. grain (corn, soybeans, and wheat) in Mexico and globally. U.S. grain is transported to Mexico either by cross-border land movements or by sea movements to Mexican ports for inland distribution. This article examines the costs of transporting U.S. grain to Mexico over land to Guadalajara (land routes) and by sea to Veracruz (water routes), tracking changes over time (table 1).

Quarter-to-quarter transportation costs. From first quarter 2023 to second quarter 2023 (quarter to quarter), total transportation costs fell for waterborne corn and soybeans (because of lower barge rates), but rose for waterborne wheat. Barge rates fell in response to low demand for barges, caused by slow export sales (Grain Transportation Report, July 20, 2023).

For U.S. corn, soybeans, and wheat shipped by the land routes, total transportation costs fell. Land-route shipping costs decreased with falling rail rates (public tariff, plus fuel surcharge). Rail rates fell in response to the drop in fuel surcharges, amid lower fuel prices.

Year-to-year transportation costs. From second quarter 2022 to second quarter 2023 (year to year), water-route costs of shipping all grain to Mexico fell, because of lower truck, barge, and ocean freight rates. A combination of falling truck rates and rising rail rates produced varied costs for land-route shipments. The land-route costs of shipping rose slightly for corn, while falling slightly for soybeans and wheat.

Quarter-to-quarter landed costs. Quarter to quarter, landed costs fell for all grain shipped by water and land routes. For waterborne corn and soybeans, landed costs dropped because of declines in transportation costs and farm values. For waterborne wheat, the dip in landed costs reflected only falling farm values. For all grain shipped by the land routes, landed costs fell because of drops in both transportation costs and farm values (table 1 and figs. 1 and 2).

¹ Water routes typically involve truck transportation to barge to oceangoing vessel, or truck to rail to oceangoing vessel.





The share of landed costs comprising transportation ranged from 9 percent to 19 percent for the water routes and from 17 percent to 30 percent for the land routes. For waterborne corn and soybeans, transportation's share of landed costs declined because of a significant drop in transportation costs. For waterborne wheat, falling farm values and an increase in transportation costs caused a marginal rise in transportation's share of landed costs. For all grain shipped by land routes, transportation's share of landed costs remained fairly stable, because falling transportation costs were mostly offset by declining farm values.

Year-to-year landed costs. Year to year, for all waterborne and land-route grain (except for land-route corn), landed costs fell, because of both lower transportation costs and lower farm values. In the case of land-route corn, lower farm values (but not transportation costs) pushed down landed costs.

U.S. Exports to Mexico: According to USDA's Federal Grain Inspection Service, in second quarter 2023, the United States exported to Mexico 3.67 million metric tons (mmt) of corn (down 6 percent quarter to quarter); 0.71 mmt of soybeans (down 42 percent quarter to quarter); and 0.70 mmt of wheat (down 12 percent quarter to quarter). Year to year, U.S. inspections destined to Mexico showed declines of 9 percent for corn, 45 percent for soybeans, and 22 percent for wheat.

Ocean Freight Rates: Ocean freight rates for shipping bulk grains to Mexico fell quarter to quarter and year to year, and from the prior 4-year average. In the first quarter—via 25,000 ton-capacity vessels—the cost of shipping a metric ton (mt) of grain from the U.S. Gulf to Veracruz, Mexico, averaged \$22.95 per mt. This was down 6 percent quarter to quarter, down 30 percent year to year, and down 6 percent from the prior-4-year average. The cost of shipping by the same route in 35,000-40,000 ton-capacity vessels averaged \$18.45 per mt. This amounted to a 2-percent decrease quarter to quarter, 30-percent decrease year to year, and 3-percent decrease from the 4-year average. During the second quarter, ocean freight rates fell in response to a weak global demand for bulk shipments.

Railroad: According to USDA's Foreign Agricultural Service, in second quarter 2023, 4.14 mmt of grain and oilseeds were exported to Mexico by land. Mostly shipped by rail, land-based exports to Mexico were down 22 percent quarter to quarter, down 5 percent year to year, and down 1 percent from the prior 3-year average. Fuel surcharges per railcar averaged \$704, down 25 percent quarter to quarter and down 21 percent year to year, but up 64 percent from the 3-year average. At the end of 2021, the railroads started reporting only rates to the Mexico border, rather than reporting rates for full routes.

Using the correlation between rail tariff rate changes for U.S. domestic shipments and Mexico shipments, estimated rail tariff rates per grain car in second quarter 2023 averaged \$8,003, unchanged from the prior quarter, but up 2 percent quarter to quarter, and up 3 percent from the 3-year average. Estimated total rail transportation costs (tariff rates plus fuel surcharges) were down 3 percent quarter to quarter, unchanged year to year, and up 6 percent from the 3-year average.

Fruit and Vegetables

In second quarter 2023, total reported shipments of fruits and vegetables by refrigerated truck from Mexico were 3.84 million tons, up 14 percent from year to year. The sum of the top five commodities increased by 177,000 tons, or 14 percent, from year to year. At 365,000 tons—up 5 percent year to year—seedless watermelons were the largest refrigerated-truck import from Mexico by volume.

For shipments crossing the Arizona border from Mexico and traveling 501-1,500 miles, truck rates averaged \$2.92 per mile—up 2 percent quarter to quarter and down 15 percent year to year. For shipments crossing the Texas-Mexico border and traveling 501-1,500 miles, rates averaged \$2.90 per mile—down 6 percent quarter to quarter and down 17 percent year to year.

Diesel fuel prices for Texas-Mexico border crossings averaged \$3.66 per gallon. Diesel fuel prices for Arizona-Mexico border crossings averaged \$4.34 per gallon. The Texas-Mexico border crossing had surplus availability in April and slight surplus availability in May and June. The Arizona-Mexico border crossing had adequate availability in April and May and a slight shortage in June.





Table 1. Quarterly costs of transporting U.S. grain and soybeans to Mexico

					20	23				
		Water ro	ute (to \	/eracruz)		L	and rout	e (to Gua	adalajara	1)
	1st qtr	2nd qtr	3rd qtr	4th qtr	Avg.	1st qtr	2nd qtr	3rd qtr	4th qtr	Avg.
			/metric				USS	/metric	ton	
					Co	rn				
Origin			IL					IA		
Truck	14.75	14.19			14.47	5.42	5.82			5.62
Rail ¹	-	-			-	105.98	104.90			105.44
Barge	30.28	17.24			23.76	-	-			-
Ocean²	18.75	19.14			18.95	-	-			-
Total transportation cost	63.78	50.57			57.18	111.40	110.72			111.06
Farm price ³	257.99	254.32			256.16	266.00	261.01			263.51
Landed cost⁴	321.77	304.89			313.33	377.40	371.73			374.57
Transport % of landed cost	19.8	16.6			18.2	29.5	29.8			29.7
					Soyb	eans				
Origin			IL					NE		
Truck	14.75	14.19			14.47	5.42	5.82			5.62
Rail ¹	-	-			-	105.21	104.07			104.64
Barge	30.28	17.24			23.76	-	-			-
Ocean ²	18.75	19.14			18.95	-	-			1
Total transportation cost	63.78	50.57			57.18	110.63	109.89			110.26
Farm price ³	543.81	536.46			540.14	546.26	520.54			533.40
Landed cost ⁴	607.59	587.03			597.31	656.89	630.43			643.66
Transport % of landed cost	10.5	8.6			9.6	16.8	17.4			17.1
					Wh	eat				
Origin			KS					KS		
Truck	5.42	5.82			5.62	5.42	5.82			5.62
Rail ¹	45.58	45.55			45.57	87.53	87.00			87.27
Ocean ²	18.75	19.14			18.95	-	-			-
Total transportation cost	69.75	70.51			70.13	92.95	92.82			92.89
Farm price ³	309.99	304.48			307.24	309.99	304.48			307.24
Landed cost ⁴	379.74	374.99			377.37	402.94	397.30			400.12
Transport % of landed cost	18.4	18.8			18.6	23.1	23.4			23.2

¹Rail rates include U.S. and Mexico portions of the movement. Mexico rail rates are estimated based on actual quoted market rates. BNSF and Union Pacific quoted rail tariff rates are through rates for shuttle trains. Rail rates include fuel surcharges, but do not include the cost of purchasing empty rail cars in the secondary market, which could exceed the rail tariff rate plus the fuel surcharge shown in the table.

Note: "-" indicates data not required or applicable. Total may not add exactly because of rounding.

Source: Compiled by the USDA, Agricultural Marketing Service.

²Source: O'Neil Commodity Consulting, Inc.

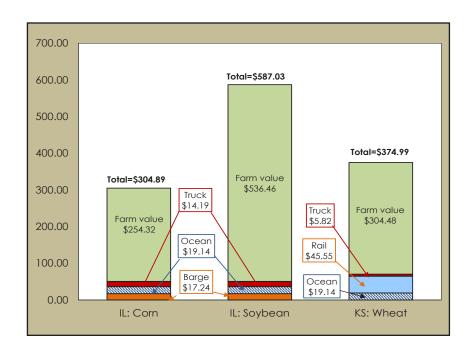
³Source: USDA/NASS.

⁴Landed cost is total transportation cost plus the farm price.





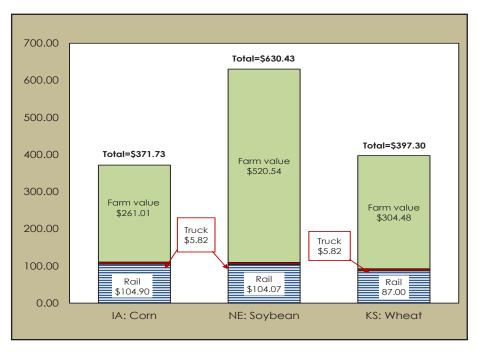
Figure 1. Second-quarter 2023 water-route shipment costs (\$/mt) to Veracruz, Mexico



Note: IL = Illinois; KS = Kansas.

Source: USDA, Agricultural Marketing Service.

Figure 2. Second-quarter 2023 land-route shipment costs (\$/mt) to Guadalajara, Mexico



Note: IA = Iowa; NE = Nebraska; KS = Kansas. Source: USDA, Agricultural Marketing Service.





QUARTERLY BULK GRAIN AND SOYBEANS

Table 2. Quarterly tariff rail rates for U.S. bulk grain shipments to Mexico (US\$/car), 2023

	Origin			Tari	ff rate/c	ar ^{1,3}			Fuel sur	charge	per car²	:
Commodity	State	Destination	1st qtr	2nd qtr	3rd qtr	4th qtr	Avg	1st qtr	2nd qtr	3rd qtr	4th qtr	Avg
	MT	Chihuahua, Cl	7,658	7,674			7,666	654	413			533
W/b a a t	ОК	Cuautitlan, EM	6,863	6,877			6,870	785	553			669
Wheat	KS	Guadalajara, JA	7,578	7,593			7,586	1,338	1,137			1,238
	TX	Salinas Victoria, NL	4,397	4,406			4,401	338	248			293
	IA	Guadalajara, JA	9,380	9,380			9,380	1,373	1,118			1,246
	SD	Celaya, GJ	8,553	8,553			8,553	856	540			698
Corn	NE	Queretaro, QA	8,576	8,576			8,576	1,085	804			944
Com	SD	Salinas Victoria, NL	7,116	7,116			7,116	650	410			530
	МО	Tlalnepantla, EM	7,921	7,921			7,921	1,058	783			921
	SD	Torreon, CU	8,064	8,064			8,064	717	452			584
	МО	Bojay (Tula), HG	8,747	8,747			8,747	1,233	1,012			1,123
Soybeans	NE	Guadalajara, JA	9,314	9,314			9,314	1,342	1,088			1,215
Soybeans	IA	El Castillo, JA	8,203	8,203			8,203	942	761			851
	KS	Torreon, CU	9,621	9,621			9,621	850	537			694

¹Rail tariff rates to Mexico are only estimated values. Due to tax changes in Mexico, all three Class I railroads that ship from the U.S. to Mexico (BNSF, Union Pacific, and Kansas City Southern) are only reporting rates to the border for interchange, called Rule 11 rates. Due to lack of data, Mexico tariff rate changes were estimated using the historical correlation between changes in US tariff rates (GTR Table 6) and Mexico tariff rates. The estimated total includes the estimated tariff through-rate for shuttle train service to Mexico and the reported fuel surcharge. The estimated rate does not include any additional costs for shuttle car service.

Sources: www.bnsf.com; www.uprr.com; www.kcsouthern.com.

²Corrections were made to previously reported rail fuel surcharge calcuations.

³Approximate load per car = 97.87 mt: corn & sorghum 56 lbs/bu, wheat & soybeans 60 lbs/bu.





Table 3. Quarterly tariff rail rates plus fuel surcharges for U.S. bulk grain shipments to Mexico, 2023

						Tariff ^{1,2}	plus fue	l surcha	rge per:				
Commodity	Origin Destination			US\$/metric ton					US\$/bushel³				
Commodity	State	Destination	1st qtr	2nd qtr	3rd qtr	4th qtr	Avg	1st qtr	2nd qtr	3rd qtr	4th qtr	Avg	
	MT	Chihuahua, Cl	84.93	82.62			83.77	2.31	2.25			2.28	
Wheat	ОК	Cuautitlan, EM	78.15	75.92			77.03	2.13	2.07			2.10	
vviieat	KS	Guadalajara, JA	91.10	89.21			90.15	2.48	2.43			2.45	
	TX	Salinas Victoria, NL	48.37	47.55			47.96	1.23	1.21			1.22	
	IA	Guadalajara, JA	109.87	107.26			108.57	2.79	2.72			2.76	
	SD	Celaya, GJ	96.14	92.91			94.53	2.44	2.36			2.40	
Corn	NE	Queretaro, QA	98.72	95.84			97.28	2.51	2.43			2.47	
Corn	SD	Salinas Victoria, NL	79.35	76.90			78.13	2.02	1.95			1.98	
	МО	Tlalnepantla, EM	91.75	88.94			90.34	2.33	2.26			2.29	
	SD	Torreon, CU	89.71	87.01			88.36	2.28	2.21			2.24	
	МО	Bojay (Tula), HG	101.98	99.72			100.85	2.78	2.71			2.74	
Coulbooks	NE	Guadalajara, JA	108.88	106.29			107.59	2.96	2.89			2.93	
Soybeans	IA	El Castillo, JA	93.44	91.59			92.52	2.54	2.49			2.52	
	KS	Torreon, CU	106.99	103.79			105.39	2.91	2.82			2.87	

¹Rail tariff rates to Mexico are only estimated values. Due to tax changes in Mexico, all three Class I railroads that ship from the U.S. to Mexico (BNSF, Union Pacific, and Kansas City Southern) are only reporting rates to the border for interchange, called Rule 11 rates. Due to lack of data, Mexico tariff rate changes were estimated using the historical correlation between changes in US tariff rates (GTR Table 6) and Mexico tariff rates. The estimated total includes the estimated tariff through-rate for shuttle train service to Mexico and the reported fuel surcharge. The estimated rate does not include any additional costs for shuttle car service.

Sources: www.bnsf.com; www.uprr.com; www.kcsouthern.com.

²Corrections were made to previously reported rail fuel surcharge calcuations.

³Approximate load per car = 97.87 mt: corn & sorghum 56 lbs/bu, wheat & soybeans 60 lbs/bu.





Table 4. Quarterly exports of U.S. distillers' dried grains with soluble (DDGS) to Mexico*

.,		1	housand metric ton	s	
Year	1st qtr	2nd qtr	3rd qtr	4th qtr	Total
2010	439	399	424	383	1,645
2011	506	430	476	369	1,781
2012	426	388	352	332	1,498
2013	284	329	290	381	1,285
2014	356	420	366	435	1,577
2015	497	276	413	463	1,649
2016	483	467	470	490	1,910
2017	604	475	551	551	2,181
2018	516	516	514	467	2,013
2019	410	574	475	491	1,950
2020	526	344	396	476	1,742
2021	481	647	611	644	2,383
2022	584	513	604	530	2,231
2023	534	510			

^{*}Data are for brewers' and distillers' dregs and waste, of which Distillers' Dried Grains with Soluble is a principal component. Source: USDA, Economic Research Service (ERS), Feed grains database.

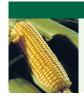




Table 5. Quarterly ocean freight rate for bulk grain shipments from the U.S. Gulf to Veracruz, Mexico

		US\$/me	etric ton		
Vessel capacity (metric ton)	1st qtr 2017	2nd qtr 2017	3rd qtr 2017	4th qtr 2017	Average
25,000	16.03	14.85	15.16	16.69	15.68
35-40,000	14.27	12.95	12.98	14.26	13.62
Vessel capacity (metric ton)	1st qtr 2018	2nd qtr 2018	3rd qtr 2018	4th qtr 2018	Average
25,000	16.11	16.20	16.68	17.94	16.73
35-40,000	13.97	14.07	14.68	15.63	14.59
Vessel capacity (metric ton)	1st qtr 2019	2nd qtr 2019	3rd qtr 2019	4th qtr 2019	Average
25,000	16.37	16.65	18.27	17.98	17.32
35-40,000	13.89	14.01	15.50	15.23	14.66
Vessel capacity (metric ton)	1st qtr 2020	2nd qtr 2020	3rd qtr 2020	4th qtr 2020	Average
25,000	16.37	15.31	17.20	17.40	16.57
35-40,000	13.64	12.41	14.39	14.43	13.72
Vessel capacity (metric ton)	1st qtr 2021	2nd qtr 2021	3rd qtr 2021	4th qtr 2021	Average
25,000	22.56	27.14	30.33	27.66	26.92
35-40,000	19.19	23.75	27.68	25.23	23.96
Vessel capacity (metric ton)	1st qtr 2022	2nd qtr 2022	3rd qtr 2022	4th qtr 2022	Average
25,000	25.81	30.00	27.12	24.42	26.84
35-40,000	22.51	26.27	23.33	20.73	23.21
Vessel capacity (metric ton)	1st qtr 2023	2nd qtr 2023	3rd qtr 2023	4th qtr 2023	Average
25,000	22.39	20.95			21.67
35-40,000	18.75	18.45			18.60

Source: O'Neil Commodity Consulting.





FRUIT AND VEGETABLE

Table 6. Fruit and vegetable truck rates for shipments between 501 to 1,500 miles crossing the U.S.-Mexico border

	U	IS\$/mile			
Origin/border crossing	1st qtr 2015	2nd qtr 2015	3rd qtr 2015	4th qtr 2015	Average
Nogales, Arizona	2.41	2.5	1.4	1.94	2.06
Pharr, Texas	2.26	2.24	1.93	1.97	2.1
Origin/border crossing	1st qtr 2016	2nd qtr 2016	3rd qtr 2016	4th qtr 2016	Average
Nogales, Arizona	2.14	2.19	1.27	1.76	1.84
Pharr, Texas	2.03	2.03	1.82	1.89	1.94
Origin/border crossing	1st qtr 2017	2nd qtr 2017	3rd qtr 2017	4th qtr 2017	Average
Nogales, Ari66zona	2.05	2.32	2.45	2.38	2.3
Pharr, Texas	2.19	2.21	2	2.36	2.19
Origin/border crossing	1st qtr 2018	2nd qtr 2018	3rd qtr 2018	4th qtr 2018	Average
Nogales, Arizona	2.92	3.21	2.75	2.47	2.84
Pharr, Texas	2.95	3.13	2.27	2.34	2.67
Origin/border crossing	1st qtr 2019	2nd qtr 2019	3rd qtr 2019	4th qtr 2019	Average
Nogales, Arizona	2.52	2.7	2.52	2.21	2.49
Pharr, Texas	2.45	2.28	2.04	2.23	2.25
Origin/border crossing	1st qtr 2020	2nd qtr 2020	3rd qtr 2020	4th qtr 2020	Average
Nogales, Arizona	2.53	2.55	2.16	2.81	2.51
Pharr, Texas	2.49	2.25	2.35	2.88	2.49
Origin/border crossing	1st qtr 2021	2nd qtr 2021	3rd qtr 2021	4th qtr 2021	Average
Nogales, Arizona	3.16	3.9	2.1	3.28	3.11
Pharr, Texas	2.93	3.19	2.9	3.44	3.11
Origin/border crossing	1st qtr 2022	2nd qtr 2022	3rd qtr 2022	4th qtr 2022	Average
Nogales, Arizona	3.66	3.44	2.86	2.92	3.22
Pharr, Texas	3.77	3.5	3.01	3.08	3.34
Origin/border crossing	1st qtr 2023	2nd qtr 2023	3rd qtr 2023	4th qtr 2023	Average
Nogales, Arizona	2.87	2.92			2.89
Pharr, Texas	3.1	2.9			3

Source: USDA, Agricultural Marketing Service (AMS), Specialty Crops Program, Market News Division.





Table 7. Quarterly U.S.-Mexico border crossing fresh fruit and vegetables truck availability

	2nd quarter 2023													
Legend:	1 =Surplus	2 = Sli	ght su	rplus	3 =	3 = Adequate 4 = Slight sho		t short	tage 5 = Shortage					
Truck availability														
Mexico borde	r crossings/month		Ap	oril				May				Jui	ne	
Week ending		4/4	4/11	4/18	4/25	5/2	5/9	5/16	5/23	5/30	6/6	6/13	6/20	6/27
Through Nogales, AZ	Cantalopes, Squash, Cucumbers, Mangoes, Honeydew, Watermelons	3	4	3	3	3	3	4	4	4	4	4	3	3
Through TX	Oranges, Grapefruit, Limes, Mangoes, Papaya, Peppers, Cucumbers, Vegetables	1	1	1	1	1	1	1	3	3	2	2	2	1

Note: NA = not available.

Source: USDA, Agricultural Marketing Service (AMS), Specialty Crop Program, Market News Division, Fruit and Vegetable Truck Rate Report.

Table 8. Top ten commodities shipped by truck to the U.S. from Mexico, 2023 (1,000 metric tons)

Commodity	2nd qtr 2023	Rank
Watermelons, seedless	365	1
Avocados	324	2
Cucumbers	266	3
Tomatoes, plum type	264	4
Tomatoes	197	5
Mangoes	193	6
Grapes	190	7
Limes	186	8
Peppers, bell type	182	9
Peppers, other	141	10

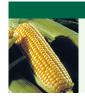




Table 9. Top five commodities shipped by truck to the U.S. from Mexico (10,000 lbs)

Commodity	1st qtr 2016	2nd qtr 2016	3rd qtr 2016	4th qtr 2016	Total 201
Tomatoes (all varieties)	131,455	89,313	51,983	66,534	339,285
Peppers (all varieties)	61,450	40,970	33,631	65,270	201,321
Avocados	60,241	37,679	34,993	40,457	173,370
Watermelons	21,726	85,723	7,560	33,670	148,679
Cucumbers	48,999	32,842	14,670	39,803	136,314
Subtotal	323,871	286,527	142,837	245,734	998,969
Other	270,078	265,393	157,375	201,602	894,448
Total	593,949	551,920	300,212	447,336	1,893,417
Commodity	1st qtr 2017	2nd qtr 2017	3rd qtr 2017	4th qtr 2017	Total 2017
Tomatoes (all varieties)	107,852	82,194	49,088	73,166	312,300
Peppers (all varieties)	67,566	38,714	31,137	59,172	196,589
Avocados	49,565	36,996	32,133	47,015	165,709
Cucumbers	47,336	32,892	16,064	44,415	140,707
Watermelons	31,890	68,086	5,264	33,293	138,533
Subtotal	304,209	258,882	133,686	257,061	953,838
Other	291,177	291,747	170,323	205,516	958,763
Total	595,386	550,629	304,009	462,577	1,912,601
Commodity	1st qtr 2018	2nd qtr 2018	3rd qtr 2018	4th qtr 2018	Total 2018
Commodity Tomatoes (all varieties)	1st qtr 2018 105,364	2nd qtr 2018 79,851	3rd qtr 2018 49,278	4th qtr 2018 62,478	Total 2018 296,971
·					
Tomatoes (all varieties)	105,364	79,851	49,278	62,478	296,971
Tomatoes (all varieties) Avocados	105,364 74,252	79,851 46,390	49,278 35,103	62,478 57,726	296,971 213,471
Tomatoes (all varieties) Avocados Peppers	105,364 74,252 55,189	79,851 46,390 49,914	49,278 35,103 35,246	62,478 57,726 49,781	296,971 213,471 190,130
Tomatoes (all varieties) Avocados Peppers Watermelons	105,364 74,252 55,189 51,964	79,851 46,390 49,914 36,452	49,278 35,103 35,246 14,131	62,478 57,726 49,781 43,288	296,971 213,471 190,130 145,835
Tomatoes (all varieties) Avocados Peppers Watermelons Cucumbers	105,364 74,252 55,189 51,964 28,829	79,851 46,390 49,914 36,452 75,429	49,278 35,103 35,246 14,131 6,062	62,478 57,726 49,781 43,288 27,782	296,971 213,471 190,130 145,835 138,102
Tomatoes (all varieties) Avocados Peppers Watermelons Cucumbers Subtotal	105,364 74,252 55,189 51,964 28,829 315,598	79,851 46,390 49,914 36,452 75,429 288,036	49,278 35,103 35,246 14,131 6,062 139,820	62,478 57,726 49,781 43,288 27,782 241,055	296,971 213,471 190,130 145,835 138,102 984,509
Tomatoes (all varieties) Avocados Peppers Watermelons Cucumbers Subtotal Other	105,364 74,252 55,189 51,964 28,829 315,598 296,266	79,851 46,390 49,914 36,452 75,429 288,036 281,580	49,278 35,103 35,246 14,131 6,062 139,820 156,781	62,478 57,726 49,781 43,288 27,782 241,055 205,426	296,971 213,471 190,130 145,835 138,102 984,509 940,053
Tomatoes (all varieties) Avocados Peppers Watermelons Cucumbers Subtotal Other Total	105,364 74,252 55,189 51,964 28,829 315,598 296,266 611,864	79,851 46,390 49,914 36,452 75,429 288,036 281,580 569,616	49,278 35,103 35,246 14,131 6,062 139,820 156,781 296,601	62,478 57,726 49,781 43,288 27,782 241,055 205,426 446,481	296,971 213,471 190,130 145,835 138,102 984,509 940,053 1,924,562
Tomatoes (all varieties) Avocados Peppers Watermelons Cucumbers Subtotal Other Total Commodity	105,364 74,252 55,189 51,964 28,829 315,598 296,266 611,864 1st qtr 2019	79,851 46,390 49,914 36,452 75,429 288,036 281,580 569,616 2nd qtr 2019	49,278 35,103 35,246 14,131 6,062 139,820 156,781 296,601 3rd qtr 2019	62,478 57,726 49,781 43,288 27,782 241,055 205,426 446,481 4th qtr 2019	296,971 213,471 190,130 145,835 138,102 984,509 940,053 1,924,562 Total 2019
Tomatoes (all varieties) Avocados Peppers Watermelons Cucumbers Subtotal Other Total Commodity Tomatoes (all varieties)	105,364 74,252 55,189 51,964 28,829 315,598 296,266 611,864 1st qtr 2019 95,760	79,851 46,390 49,914 36,452 75,429 288,036 281,580 569,616 2nd qtr 2019 78,123	49,278 35,103 35,246 14,131 6,062 139,820 156,781 296,601 3rd qtr 2019 55,836	62,478 57,726 49,781 43,288 27,782 241,055 205,426 446,481 4th qtr 2019 69,366	296,971 213,471 190,130 145,835 138,102 984,509 940,053 1,924,562 Total 2019 299,085
Tomatoes (all varieties) Avocados Peppers Watermelons Cucumbers Subtotal Other Total Commodity Tomatoes (all varieties) Peppers (all varieties)	105,364 74,252 55,189 51,964 28,829 315,598 296,266 611,864 1st qtr 2019 95,760 65,865	79,851 46,390 49,914 36,452 75,429 288,036 281,580 569,616 2nd qtr 2019 78,123 45,479	49,278 35,103 35,246 14,131 6,062 139,820 156,781 296,601 3rd qtr 2019 55,836 38,006	62,478 57,726 49,781 43,288 27,782 241,055 205,426 446,481 4th qtr 2019 69,366 56,847	296,971 213,471 190,130 145,835 138,102 984,509 940,053 1,924,562 Total 2019 299,085 206,197
Tomatoes (all varieties) Avocados Peppers Watermelons Cucumbers Subtotal Other Total Commodity Tomatoes (all varieties) Peppers (all varieties) Avocados	105,364 74,252 55,189 51,964 28,829 315,598 296,266 611,864 1st qtr 2019 95,760 65,865 57,162	79,851 46,390 49,914 36,452 75,429 288,036 281,580 569,616 2nd qtr 2019 78,123 45,479 25,622	49,278 35,103 35,246 14,131 6,062 139,820 156,781 296,601 3rd qtr 2019 55,836 38,006 42,135	62,478 57,726 49,781 43,288 27,782 241,055 205,426 446,481 4th qtr 2019 69,366 56,847 58,520	296,971 213,471 190,130 145,835 138,102 984,509 940,053 1,924,562 Total 2019 299,085 206,197 183,439
Tomatoes (all varieties) Avocados Peppers Watermelons Cucumbers Subtotal Other Total Commodity Tomatoes (all varieties) Peppers (all varieties) Avocados Cucumbers	105,364 74,252 55,189 51,964 28,829 315,598 296,266 611,864 1st qtr 2019 95,760 65,865 57,162 24,868	79,851 46,390 49,914 36,452 75,429 288,036 281,580 569,616 2nd qtr 2019 78,123 45,479 25,622 88,165	49,278 35,103 35,246 14,131 6,062 139,820 156,781 296,601 3rd qtr 2019 55,836 38,006 42,135 11,138	62,478 57,726 49,781 43,288 27,782 241,055 205,426 446,481 4th qtr 2019 69,366 56,847 58,520 30,506	296,971 213,471 190,130 145,835 138,102 984,509 940,053 1,924,562 Total 2019 299,085 206,197 183,439 154,677
Tomatoes (all varieties) Avocados Peppers Watermelons Cucumbers Subtotal Other Total Commodity Tomatoes (all varieties) Peppers (all varieties) Avocados Cucumbers Watermelons	105,364 74,252 55,189 51,964 28,829 315,598 296,266 611,864 1st qtr 2019 95,760 65,865 57,162 24,868 48,614	79,851 46,390 49,914 36,452 75,429 288,036 281,580 569,616 2nd qtr 2019 78,123 45,479 25,622 88,165 34,729	49,278 35,103 35,246 14,131 6,062 139,820 156,781 296,601 3rd qtr 2019 55,836 38,006 42,135 11,138 18,919	62,478 57,726 49,781 43,288 27,782 241,055 205,426 446,481 4th qtr 2019 69,366 56,847 58,520 30,506 41,334	296,971 213,471 190,130 145,835 138,102 984,509 940,053 1,924,562 Total 2019 299,085 206,197 183,439 154,677 143,596

Source: Data is obtained from the Department of Homeland Security (DHS), U.S. Customs and Border Protection (CBP) through USDA, AMS, Market News.





Commodity	1st qtr 2020	2nd qtr 2020	3rd qtr 2020	4th qtr 2020	Total 2020
Tomatoes (all varieties)	105,181	82,796	66,804	83,797	334,784
Peppers (all varieties)	72,764	47,080	39,078	60,235	217,633
Avocados	58,796	48,461	45,480	63,907	217,195
Cucumbers	51,075	71,858	12,878	47,328	154,587
Watermelons	33,236	3,6687	20,722	38,603	150,683
Subtotal	32,1052	28,6882	184,962	293,870	1,074,882
Other	287,121	304,600	191,721	241,370	1,028,093
Total	608,173	591,482	376,683	535,240	2,102,975
Commodity	1st qtr 2021	2nd qtr 2021	3rd qtr 2021	4th qtr 2021	Total 2021
Tomatoes (all varieties)	119,801	90,736	77,009	87,045	374,591
Peppers (all varieties)	85,890	57,801	42,944	67,413	254,048
Avocados	74,254	58,525	44,100	60,319	237,198
Cucumbers	54,355	81,417	31,188	51,131	184,903
Watermelons	38,041	48,229	14,332	34,991	15,607
Subtotal	372,341	336,708	209,573	300,899	1,208,347
Other	338,366	364,523	232,163	247,863	1,181,488
Total	710,707	701,231	441,736	548,762	2,389,835
		·			
Commodity	1st qtr 2022	2nd qtr 2022	3rd qtr 2022	4th qtr 2022	Total 2022
				-	
Commodity	1st qtr 2022	2nd qtr 2022	3rd qtr 2022	4th qtr 2022	Total 2022
Commodity Tomatoes (all varieties)	1st qtr 2022 107,847	2nd qtr 2022 94,495	3rd qtr 2022 84,287	4th qtr 2022 92,668	Total 2022 379,297
Commodity Tomatoes (all varieties) Peppers (all varieties)	1st qtr 2022 107,847 79,451	2nd qtr 2022 94,495 53,250	3rd qtr 2022 84,287 39,669	4th qtr 2022 92,668 54,831	Total 2022 379,297 227,201
Commodity Tomatoes (all varieties) Peppers (all varieties) Avocados	1st qtr 2022 107,847 79,451 58,684	2nd qtr 2022 94,495 53,250 39,754	3rd qtr 2022 84,287 39,669 43,174	4th qtr 2022 92,668 54,831 63,620	Total 2022 379,297 227,201 205,232
Commodity Tomatoes (all varieties) Peppers (all varieties) Avocados Watermelons	1st qtr 2022 107,847 79,451 58,684 55,289	2nd qtr 2022 94,495 53,250 39,754 48,494	3rd qtr 2022 84,287 39,669 43,174 30,653	92,668 54,831 63,620 45,636	Total 2022 379,297 227,201 205,232 180,072
Commodity Tomatoes (all varieties) Peppers (all varieties) Avocados Watermelons Cucumbers	1st qtr 2022 107,847 79,451 58,684 55,289 26,762	2nd qtr 2022 94,495 53,250 39,754 48,494 70,132	3rd qtr 2022 84,287 39,669 43,174 30,653 8,979	92,668 54,831 63,620 45,636 36,822	Total 2022 379,297 227,201 205,232 180,072 142,695
Commodity Tomatoes (all varieties) Peppers (all varieties) Avocados Watermelons Cucumbers Subtotal Other Total	1st qtr 2022 107,847 79,451 58,684 55,289 26,762 328,033	2nd qtr 2022 94,495 53,250 39,754 48,494 70,132 306,125 366,998 673,123	3rd qtr 2022 84,287 39,669 43,174 30,653 8,979 206,762 234,550 441,312	92,668 54,831 63,620 45,636 36,822 293,577	Total 2022 379,297 227,201 205,232 180,072 142,695 1,134,497
Commodity Tomatoes (all varieties) Peppers (all varieties) Avocados Watermelons Cucumbers Subtotal Other	1st qtr 2022 107,847 79,451 58,684 55,289 26,762 328,033 345,147	2nd qtr 2022 94,495 53,250 39,754 48,494 70,132 306,125 366,998	3rd qtr 2022 84,287 39,669 43,174 30,653 8,979 206,762 234,550	92,668 54,831 63,620 45,636 36,822 293,577 271,000	Total 2022 379,297 227,201 205,232 180,072 142,695 1,134,497 1,217,695
Commodity Tomatoes (all varieties) Peppers (all varieties) Avocados Watermelons Cucumbers Subtotal Other Total	1st qtr 2022 107,847 79,451 58,684 55,289 26,762 328,033 345,147 673,180	2nd qtr 2022 94,495 53,250 39,754 48,494 70,132 306,125 366,998 673,123	3rd qtr 2022 84,287 39,669 43,174 30,653 8,979 206,762 234,550 441,312	92,668 54,831 63,620 45,636 36,822 293,577 271,000 564,577	Total 2022 379,297 227,201 205,232 180,072 142,695 1,134,497 1,217,695 2,352,192
Commodity Tomatoes (all varieties) Peppers (all varieties) Avocados Watermelons Cucumbers Subtotal Other Total Commodity	1st qtr 2022 107,847 79,451 58,684 55,289 26,762 328,033 345,147 673,180 1st qtr 2023	2nd qtr 2022 94,495 53,250 39,754 48,494 70,132 306,125 366,998 673,123 2nd qtr 2023	3rd qtr 2022 84,287 39,669 43,174 30,653 8,979 206,762 234,550 441,312	92,668 54,831 63,620 45,636 36,822 293,577 271,000 564,577	Total 2022 379,297 227,201 205,232 180,072 142,695 1,134,497 1,217,695 2,352,192 Total 2023
Commodity Tomatoes (all varieties) Peppers (all varieties) Avocados Watermelons Cucumbers Subtotal Other Total Commodity Tomatoes (all varieties) Peppers (all varieties) Avocados	1st qtr 2022 107,847 79,451 58,684 55,289 26,762 328,033 345,147 673,180 1st qtr 2023 114,171	2nd qtr 2022 94,495 53,250 39,754 48,494 70,132 306,125 366,998 673,123 2nd qtr 2023 105,170	3rd qtr 2022 84,287 39,669 43,174 30,653 8,979 206,762 234,550 441,312	92,668 54,831 63,620 45,636 36,822 293,577 271,000 564,577	Total 2022 379,297 227,201 205,232 180,072 142,695 1,134,497 1,217,695 2,352,192 Total 2023 219,341
Commodity Tomatoes (all varieties) Peppers (all varieties) Avocados Watermelons Cucumbers Subtotal Other Total Commodity Tomatoes (all varieties) Peppers (all varieties)	1st qtr 2022 107,847 79,451 58,684 55,289 26,762 328,033 345,147 673,180 1st qtr 2023 114,171 80,619	2nd qtr 2022 94,495 53,250 39,754 48,494 70,132 306,125 366,998 673,123 2nd qtr 2023 105,170 64,589	3rd qtr 2022 84,287 39,669 43,174 30,653 8,979 206,762 234,550 441,312	4th qtr 2022 92,668 54,831 63,620 45,636 36,822 293,577 271,000 564,577 4th qtr 2023	Total 2022 379,297 227,201 205,232 180,072 142,695 1,134,497 1,217,695 2,352,192 Total 2023 219,341 145,208
Commodity Tomatoes (all varieties) Peppers (all varieties) Avocados Watermelons Cucumbers Subtotal Other Total Commodity Tomatoes (all varieties) Peppers (all varieties) Avocados	1st qtr 2022 107,847 79,451 58,684 55,289 26,762 328,033 345,147 673,180 1st qtr 2023 114,171 80,619 75,768	2nd qtr 2022 94,495 53,250 39,754 48,494 70,132 306,125 366,998 673,123 2nd qtr 2023 105,170 64,589 64,800	3rd qtr 2022 84,287 39,669 43,174 30,653 8,979 206,762 234,550 441,312	4th qtr 2022 92,668 54,831 63,620 45,636 36,822 293,577 271,000 564,577 4th qtr 2023	Total 2022 379,297 227,201 205,232 180,072 142,695 1,134,497 1,217,695 2,352,192 Total 2023 219,341 145,208 140,568
Commodity Tomatoes (all varieties) Peppers (all varieties) Avocados Watermelons Cucumbers Subtotal Other Total Commodity Tomatoes (all varieties) Peppers (all varieties) Avocados Cucumbers	1st qtr 2022 107,847 79,451 58,684 55,289 26,762 328,033 345,147 673,180 1st qtr 2023 114,171 80,619 75,768 62.605	2nd qtr 2022 94,495 53,250 39,754 48,494 70,132 306,125 366,998 673,123 2nd qtr 2023 105,170 64,589 64,800 53,187	3rd qtr 2022 84,287 39,669 43,174 30,653 8,979 206,762 234,550 441,312	4th qtr 2022 92,668 54,831 63,620 45,636 36,822 293,577 271,000 564,577 4th qtr 2023	Total 2022 379,297 227,201 205,232 180,072 142,695 1,134,497 1,217,695 2,352,192 Total 2023 219,341 145,208 140,568 115,792
Commodity Tomatoes (all varieties) Peppers (all varieties) Avocados Watermelons Cucumbers Subtotal Other Total Commodity Tomatoes (all varieties) Peppers (all varieties) Avocados Cucumbers Squash	1st qtr 2022 107,847 79,451 58,684 55,289 26,762 328,033 345,147 673,180 1st qtr 2023 114,171 80,619 75,768 62.605 35,477	2nd qtr 2022 94,495 53,250 39,754 48,494 70,132 306,125 366,998 673,123 2nd qtr 2023 105,170 64,589 64,800 53,187 74,173	3rd qtr 2022 84,287 39,669 43,174 30,653 8,979 206,762 234,550 441,312 3rd qtr 2023	4th qtr 2022 92,668 54,831 63,620 45,636 36,822 293,577 271,000 564,577 4th qtr 2023 .	Total 2022 379,297 227,201 205,232 180,072 142,695 1,134,497 1,217,695 2,352,192 Total 2023 219,341 145,208 140,568 115,792 108,246

Source: Data is obtained from the Department of Homeland Security (DHS), U.S. Customs and Border Protection (CBP) through USDA, AMS, Market News.





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- U.S. Grain and Soybean Exports to Mexico A Modal Share Transportation Analysis (PDF)
- Grain Transportation Report
- Agricultural Refrigerated Truck Quarterly

Data Sets (all XLS files):

- Figure 1: Second-quarter 2023 water-route shipment costs (\$/mt) to Veracruz, Mexico
- Figure 2: Second-quarter 2023 land-route shipment costs (\$/mt) to Guadalajara, Mexico
- Table 1: Quarterly costs of transporting U.S. grain and soybeans to Mexico
- Table 2: Quarterly tariff rail rates for U.S. bulk grain shipments to Mexico (US\$/car), 2023
- Table 3: Quarterly tariff rail rates plus fuel surcharge for U.S. bulk grain shipments to Mexico, 2023
- Table 4: Quarterly exports of U.S. Distillers' Dried Grains with Soluble (DDGS) to Mexico
- Table 5: Quarterly ocean freight rate for bulk shipments from the U.S. Gulf to Veracruz, Mexico
- <u>Table 6: Fruit and vegetable truck rates for shipments between 501 and 1,500 miles crossing the U.S.-Mexico border</u>
- Table 7: Quarterly U.S.-Mexico border crossing fresh fruit and vegetables truck availability
- Table 8: Top ten commodities shipped by truck to the U.S. from Mexico, 2023 (1,000 metric tons)
- Table 9: Top five commodities shipped by truck to the U.S. from Mexico (10,000 lbs)

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