

Costos de referencia por tonelada para un tractocamión

A. **Costo de traslado por tonelada:** costo de movilizar el vehículo en un origen destino (excluye el costo de las horas de espera, carga y descarga):

	Destino																												
Origen	ARMENIA	BARRANQUILLA	BOGOTA	BUCARAMANGA	BUENAVENTURA	CALI	CARTAGENA	CARTAGO (VALLE)	CUCUTA	DUITAMA	FLORENCIA	IBAGUE	IPIALES-NARIÑO	MANIZALES	MEDELLÍN	MOCOCA	MONTERIA	NEIVA	PASTO	PEREIRA	POPAYAN	RIOHACHA	SANTA MARTA	SINCELEJO	SOGAMOSO-BOYACA	TUMACO	VALLEDUPAR	VILLAVICENCIO	YOPAL
ARMENIA	\$ 0.00	\$ 148,304.00	\$ 51,754.43	\$ 91,324.92	\$ 37,387.68	\$ 25,370.16	\$ 143,415.70	\$ 6,257.03	\$ 130,244.45	\$ 94,443.34	\$ 81,908.34	\$ 16,073.53	\$ 211,772.26	\$ 16,285.97	\$ 53,806.80	\$ 95,894.41	\$ 108,832.54	\$ 45,908.73	\$ 93,531.19	\$ 6,771.56	\$ 48,653.53	\$ 191,765.16	\$ 149,764.82	\$ 118,235.99	\$ 87,224.49	\$ 141,211.21	\$ 152,218.32	\$ 78,585.87	\$ 111,663.39
BARRANQUILLA	\$ 148,304.93	\$ 0.00	\$ 141,489.27	\$ 86,397.65	\$ 180,002.07	\$ 167,966.38	\$ 14,129.86	\$ 145,910.82	\$ 99,523.92	\$ 150,344.26	\$ 226,951.29	\$ 143,404.35	\$ 251,582.97	\$ 130,940.81	\$ 102,594.40	\$ 240,969.47	\$ 50,854.76	\$ 166,005.92	\$ 235,923.17	\$ 136,823.18	\$ 188,956.45	\$ 42,810.61	\$ 11,980.30	\$ 32,626.69	\$ 146,509.36	\$ 279,606.89	\$ 49,637.47	\$ 169,077.60	\$ 175,194.00
BOGOTA	\$ 51,754.43	\$ 141,489.27	\$ 0.00	\$ 62,394.85	\$ 89,707.17	\$ 77,486.35	\$ 136,880.82	\$ 55,192.59	\$ 99,525.94	\$ 37,508.08	\$ 84,808.68	\$ 31,598.64	\$ 161,833.85	\$ 49,993.90	\$ 62,908.30	\$ 98,797.73	\$ 120,777.89	\$ 47,469.51	\$ 146,062.10	\$ 55,703.13	\$ 99,702.77	\$ 178,263.47	\$ 134,089.58	\$ 130,173.35	\$ 32,803.24	\$ 195,192.45	\$ 138,707.74	\$ 21,709.50	\$ 61,342.87
BUCARAMANGA	\$ 91,324.92	\$ 86,397.65	\$ 61,055.55	\$ 0.00	\$ 132,354.04	\$ 118,425.35	\$ 91,903.14	\$ 92,122.54	\$ 34,839.78	\$ 62,582.71	\$ 154,668.10	\$ 74,215.31	\$ 205,753.62	\$ 79,675.00	\$ 71,038.03	\$ 168,675.20	\$ 113,888.50	\$ 114,518.46	\$ 189,958.06	\$ 86,888.45	\$ 132,586.55	\$ 112,585.83	\$ 75,589.89	\$ 95,649.73	\$ 51,624.71	\$ 223,990.37	\$ 72,995.72	\$ 91,827.50	\$ 88,846.57
BUENAVENTURA	\$ 37,387.68	\$ 180,002.07	\$ 89,707.17	\$ 132,354.04	\$ 0.00	\$ 25,732.93	\$ 170,360.75	\$ 37,133.10	\$ 168,184.77	\$ 132,390.53	\$ 89,902.58	\$ 54,219.29	\$ 111,588.10	\$ 51,943.23	\$ 83,500.68	\$ 88,841.96	\$ 140,578.57	\$ 84,991.15	\$ 95,888.33	\$ 40,688.56	\$ 47,380.59	\$ 227,734.91	\$ 186,340.14	\$ 150,004.77	\$ 125,604.84	\$ 143,397.16	\$ 188,198.82	\$ 116,406.88	\$ 155,253.74
CALI	\$ 25,370.16	\$ 167,966.38	\$ 77,486.35	\$ 118,425.35	\$ 118,425.35	\$ 0.00	\$ 163,059.30	\$ 28,977.31	\$ 155,737.79	\$ 121,830.76	\$ 61,193.95	\$ 42,314.09	\$ 83,333.01	\$ 39,897.94	\$ 71,788.32	\$ 60,132.95	\$ 132,426.86	\$ 67,617.69	\$ 28,804.56	\$ 16,970.18	\$ 219,600.34	\$ 173,199.89	\$ 141,849.60	\$ 117,478.21	\$ 112,772.16	\$ 180,056.62	\$ 104,332.74	\$ 136,554.82	
CARTAGENA	\$ 143,415.70	\$ 14,129.86	\$ 136,880.82	\$ 91,903.14	\$ 170,360.75	\$ 163,059.30	\$ 0.00	\$ 139,417.51	\$ 100,750.98	\$ 152,237.20	\$ 220,482.10	\$ 136,051.49	\$ 246,743.14	\$ 126,038.69	\$ 97,668.69	\$ 234,413.93	\$ 42,364.68	\$ 158,851.82	\$ 230,999.80	\$ 131,863.48	\$ 186,303.96	\$ 62,314.05	\$ 27,331.15	\$ 25,723.30	\$ 155,293.33	\$ 285,587.31	\$ 180,407.67	\$ 163,537.32	\$ 167,573.20
CARTAGO (VALLE)	\$ 6,257.03	\$ 145,069.45	\$ 62,643.77	\$ 92,413.87	\$ 37,517.28	\$ 25,648.97	\$ 137,494.54	\$ 0.00	\$ 129,349.58	\$ 90,983.90	\$ 89,006.70	\$ 22,733.77	\$ 103,398.27	\$ 14,303.44	\$ 46,116.80	\$ 103,004.33	\$ 103,454.96	\$ 52,386.71	\$ 92,362.03	\$ 3,176.89	\$ 49,147.93	\$ 190,639.84	\$ 147,812.33	\$ 111,976.99	\$ 94,320.07	\$ 132,975.82	\$ 151,039.06	\$ 85,085.68	\$ 118,015.98
CUCUTA	\$ 130,244.45	\$ 95,456.14	\$ 98,186.64	\$ 34,839.78	\$ 168,184.77	\$ 155,737.79	\$ 100,750.98	\$ 123,161.70	\$ 0.00	\$ 96,997.50	\$ 184,118.50	\$ 111,980.86	\$ 242,136.15	\$ 117,911.15	\$ 98,554.57	\$ 198,093.01	\$ 124,120.88	\$ 151,892.16	\$ 226,369.02	\$ 124,237.24	\$ 167,022.82	\$ 123,728.17	\$ 87,992.93	\$ 105,874.72	\$ 81,071.95	\$ 261,280.99	\$ 84,970.83	\$ 128,860.91	\$ 125,371.01
DUITAMA	\$ 93,104.04	\$ 150,344.26	\$ 25,785.79	\$ 62,582.71	\$ 131,051.23	\$ 120,491.45	\$ 152,237.20	\$ 89,644.60	\$ 60,997.50	\$ 0.00	\$ 119,263.81	\$ 65,398.53	\$ 196,507.73	\$ 80,735.63	\$ 90,611.49	\$ 133,250.84	\$ 153,122.94	\$ 91,674.33	\$ 175,812.34	\$ 88,661.49	\$ 132,502.10	\$ 162,189.65	\$ 139,422.88	\$ 162,507.66	\$ 3,331.83	\$ 221,701.87	\$ 122,598.99	\$ 56,204.04	\$ 26,475.52
FLORENCIA	\$ 81,908.34	\$ 226,951.29	\$ 84,808.68	\$ 156,007.41	\$ 89,902.58	\$ 61,193.95	\$ 220,482.10	\$ 89,006.70	\$ 185,457.81	\$ 120,603.12	\$ 0.00	\$ 65,908.62	\$ 93,831.95	\$ 29,621.06	\$ 123,055.21	\$ 39,801.65	\$ 184,498.59	\$ 33,993.26	\$ 80,487.99	\$ 89,220.35	\$ 41,186.10	\$ 241,984.39	\$ 214,002.38	\$ 193,924.77	\$ 123,928.54	\$ 123,441.65	\$ 202,446.87	\$ 107,664.01	\$ 148,827.98
IBAGUE	\$ 16,073.53	\$ 144,426.64	\$ 31,598.64	\$ 74,215.31	\$ 54,219.29	\$ 42,314.09	\$ 137,073.77	\$ 19,488.19	\$ 111,980.86	\$ 66,737.83	\$ 65,908.62	\$ 0.00	\$ 126,410.34	\$ 33,183.37	\$ 67,857.06	\$ 79,892.87	\$ 118,608.65	\$ 26,300.41	\$ 110,695.96	\$ 23,809.00	\$ 61,381.92	\$ 176,094.22	\$ 130,818.30	\$ 133,354.17	\$ 71,216.62	\$ 158,380.83	\$ 136,538.50	\$ 58,315.23	\$ 97,003.83
IPIALES-NARIÑO	\$ 110,772.26	\$ 251,582.97	\$ 161,833.85	\$ 205,753.62	\$ 111,588.10	\$ 83,333.01	\$ 246,743.14	\$ 103,398.27	\$ 242,136.15	\$ 197,847.03	\$ 93,831.95	\$ 126,410.34	\$ 0.00	\$ 127,045.16	\$ 155,744.71	\$ 35,147.03	\$ 206,871.98	\$ 95,266.29	\$ 14,724.67	\$ 112,498.22	\$ 52,954.56	\$ 293,997.53	\$ 265,427.14	\$ 216,272.76	\$ 191,879.88	\$ 33,240.72	\$ 254,398.07	\$ 188,638.66	\$ 227,554.28
MANIZALES	\$ 16,285.97	\$ 130,940.81	\$ 49,993.90	\$ 79,675.00	\$ 51,943.23	\$ 39,897.94	\$ 126,038.69	\$ 13,717.67	\$ 117,911.15	\$ 82,074.93	\$ 99,621.05	\$ 33,183.37	\$ 127,045.16	\$ 0.00	\$ 34,675.59	\$ 113,605.05	\$ 92,718.17	\$ 65,088.32	\$ 111,603.86	\$ 8,929.96	\$ 64,749.06	\$ 176,923.82	\$ 133,067.87	\$ 102,123.68	\$ 80,978.83	\$ 157,069.39	\$ 137,324.48	\$ 63,238.72	\$ 110,387.51
MEDELLÍN	\$ 53,806.80	\$ 102,594.40	\$ 62,908.30	\$ 71,038.03	\$ 83,500.68	\$ 71,788.32	\$ 97,668.69	\$ 40,095.22	\$ 98,554.57	\$ 91,950.79	\$ 123,055.21	\$ 67,857.06	\$ 155,744.71	\$ 34,675.59	\$ 0.00	\$ 143,994.97	\$ 59,219.28	\$ 78,276.46	\$ 140,069.15	\$ 39,726.77	\$ 95,471.46	\$ 160,644.73	\$ 123,389.70	\$ 170,872.11	\$ 103,370.38	\$ 194,361.61	\$ 120,329.46	\$ 88,846.61	\$ 123,601.41
MOCOCA	\$ 89,903.16	\$ 222,981.48	\$ 90,936.45	\$ 151,374.67	\$ 84,371.68	\$ 57,760.67	\$ 216,479.37	\$ 97,013.08	\$ 179,196.81	\$ 122,547.10	\$ 39,014.46	\$ 74,688.84	\$ 33,244.93	\$ 107,613.80	\$ 132,414.98	\$ 0.00	\$ 187,640.57	\$ 46,408.79	\$ 20,884.81	\$ 95,277.36	\$ 40,030.68	\$ 236,551.20	\$ 211,297.76	\$ 197,091.11	\$ 125,147.73	\$ 62,791.19	\$ 201,253.46	\$ 107,613.80	\$ 144,438.35
MONTERIA	\$ 108,832.54	\$ 49,258.99	\$ 120,777.89	\$ 112,292.74	\$ 140,578.57	\$ 132,426.86	\$ 42,364.68	\$ 103,454.96	\$ 122,525.11	\$ 154,462.24	\$ 184,498.59	\$ 118,608.65	\$ 206,871.98	\$ 92,718.17	\$ 59,219.28	\$ 203,188.60	\$ 0.00	\$ 154,083.30	\$ 189,582.87	\$ 95,124.24	\$ 150,584.05	\$ 107,840.52	\$ 79,402.49	\$ 15,805.80	\$ 162,606.73	\$ 232,464.69	\$ 67,503.22	\$ 148,767.85	\$ 179,569.55
NEIVA	\$ 45,908.73	\$ 164,360.29	\$ 49,115.14	\$ 115,857.76	\$ 84,991.15	\$ 53,242.94	\$ 157,993.38	\$ 53,856.84	\$ 153,231.46	\$ 93,013.64	\$ 33,993.26	\$ 26,300.41	\$ 95,266.29	\$ 65,088.32	\$ 78,276.46	\$ 47,976.06	\$ 154,083.30	\$ 0.00	\$ 80,267.89	\$ 53,231.06	\$ 38,721.82	\$ 206,716.39	\$ 154,550.03	\$ 163,495.30	\$ 88,780.54	\$ 135,043.67	\$ 166,433.34	\$ 74,224.50	\$ 112,764.40
PASTO	\$ 93,531.19	\$ 235,923.17	\$ 146,062.10	\$ 189,958.06	\$ 95,888.33	\$ 67,617.69	\$ 230,999.80	\$ 90,047.48	\$ 226,369.02	\$ 177,151.64	\$ 80,487.99	\$ 110,695.96	\$ 14,724.67	\$ 111,603.86	\$ 140,069.15	\$ 20,884.81	\$ 189,582.87	\$ 80,267.89	\$ 0.00	\$ 96,792.76	\$ 37,299.32	\$ 280,111.20	\$ 249,704.08	\$ 198,969.54	\$ 175,881.75	\$ 46,839.64	\$ 238,865.73	\$ 172,876.01	\$ 121,712.58
PEREIRA	\$ 6,771.56	\$ 136,823.18	\$ 55,703.13	\$ 86,888.45	\$ 40,688.56	\$ 28,804.56	\$ 131,863.48	\$ 3,703.86	\$ 124,237.24	\$ 90,000.80	\$ 89,220.35	\$ 23,809.00	\$ 112,498.22	\$ 8,929.96	\$ 39,726.77	\$ 102,928.49	\$ 95,267.79	\$ 53,231.06	\$ 96,792.76	\$ 0.00	\$ 53,624.86	\$ 185,010.65	\$ 142,985.65	\$ 104,666.44	\$ 89,340.14	\$ 141,820.23	\$ 145,451.34	\$ 182,030.78	\$ 110,490.39
POPAYAN	\$ 48,653.53	\$ 188,956.45	\$ 99,702.77	\$ 132,586.55	\$ 47,380.59	\$ 16,970.18	\$ 186,303.96	\$ 49,147.93	\$ 167,022.82	\$ 133,841.40	\$ 41,186.10	\$ 61,381.92	\$ 52,954.56	\$ 64,749.06	\$ 95,471.46	\$ 40,030.68	\$ 150,584.05	\$ 38,721.82	\$ 37,299.32	\$ 53,624.86	\$ 0.00	\$ 241,059.53	\$ 213,606.93	\$ 159,964.34	\$ 136,836.64	\$ 90,734.31	\$ 200,731.00	\$ 128,933.96	\$ 163,370.69
RIOHACHA	\$ 191,765.16	\$ 42,810.61	\$ 178,263.47	\$ 112,585.83	\$ 227,734.91	\$ 219,600.34	\$ 62,314.05	\$ 190,639.84	\$ 124,543.86	\$ 162,189.65	\$ 241,984.39	\$ 176,094.22	\$ 293,997.53	\$ 176,923.82	\$ 160,644.73	\$ 256,704.78	\$ 109,436.28	\$ 207,532.08	\$ 280,111.20	\$ 185,010.65	\$ 241,059.53	\$ 0.00	\$ 26,399.69	\$ 92,032.96	\$ 171,285.00	\$ 323,107.67	\$ 31,974.92	\$ 202,242.04	\$ 193,811.89
SANTA MARTA	\$ 149,764.82	\$ 11,980.30	\$ 134,089.58	\$ 75,589.89	\$ 186,340.14	\$ 173,199.89	\$ 27,331.15	\$ 162,614.86	\$ 87,992.93	\$ 139,422.88	\$ 214,002.38	\$ 129,218.97	\$ 265,427.14	\$ 133,067.87	\$ 123,389.70	\$ 228,252.78	\$ 80,998.26	\$ 155,365.72	\$ 249,704.08	\$ 142,985.65	\$ 209,318.31	\$ 26,399.69	\$ 0.00	\$ 63,594.78	\$ 142,837.58	\$ 303,976.58	\$ 50,942.62	\$ 161,666.00	\$ 167,644.58
SINCELEJO	\$ 118,235.99	\$ 32,626.69	\$ 130,173.35	\$ 95,649.73	\$ 150,004.77	\$ 141,849.60	\$ 25,723.30	\$ 111,976.99	\$ 103,854.72	\$ 163,846.96	\$ 90,824.77	\$ 128,004.10	\$ 216,272.76	\$ 102,123.68	\$ 120,772.11	\$ 212,617.77	\$ 15,805.80	\$ 163,495.30	\$ 198,969.54	\$ 104,335.00	\$ 92,032.96	\$ 63,594.78	\$ 0.00	\$ 172,005.49	\$ 124,856.51	\$ 241,856.51	\$ 158,195.93	\$ 93,912.96	\$ 158,823.33
SOGAMOSO-BOYACA	\$ 85,885.19	\$ 143,299.73	\$ 28,816.24	\$ 56,439.18	\$ 125,177.81	\$ 104,654.25	\$ 137,014.09	\$ 92,980.76	\$ 92,882.82	\$ 3,331.83	\$ 122,589.24	\$ 66,480.67	\$ 190,540.58	\$ 83,044.88	\$ 102,612.36	\$ 136,570.50	\$ 161,267.42	\$ 82,242.27	\$ 181,613.90	\$ 81,802.98	\$ 136,287.03	\$ 171,285.00	\$ 140,995.07	\$ 170,666.19	\$ 0.00	\$ 220,163.29	\$ 130,946.44	\$ 56,663.67	\$ 25,375.71
TUMACO	\$ 141,211.21	\$ 279,606.89	\$ 195,192.45	\$ 223,990.37	\$ 143,397.16	\$ 112,772.16	\$ 285,587.31	\$ 132,975.82	\$ 261,280.99	\$ 223,041.17	\$ 123,441.65	\$ 158,380.83	\$ 33,240.72	\$ 157,069.39	\$ 194,361.61	\$ 64,693.28	\$ 232,464.69	\$ 135,043.67	\$ 46,839.64	\$ 141,820.23	\$ 90,734.31	\$ 323,107.67	\$ 303,976.58	\$ 241,856.51	\$ 218,900.82	\$ 0.00	\$ 282,786.11	\$ 227,600.17	\$ 266,596.77
VALLEDUPAR	\$ 152,218.32	\$ 49,637.47	\$ 138,707.74	\$ 72,995.72	\$ 188,198.82	\$ 180,056.62	\$ 58,407.67	\$ 151,039.06	\$ 84,970.83	\$ 122,598.99	\$ 202,446.87	\$ 136,538.50	\$ 254,398.07	\$															

B. Costo por tonelada de una hora hábil adicional de espera, carga y descarga: \$853

A diferencia de los costos de traslado, estos costos se producen cuando el vehículo está apagado mientras se espera o ejecuta el cargue y descargue. Se habla de horas hábiles porque los costos se calculan asumiendo que el vehículo sólo opera 12 horas diarias. Por ejemplo, si se trabaja entre las 6am y las 6pm, NO se deben contar como horas de espera, carga y descarga el tiempo que está fuera de este horario.

C. ¿Cómo calcular el costo total por tonelada?

$$\text{Costo por tonelada} = \text{Costo de traslado por tonelada} + (\text{Horas de espera, carga y descarga}) \times \$853$$

D. ¿Cómo calcular el costo del viaje?

$$\text{Costo del viaje} = \text{Costo por tonelada} \times 34$$

Nota: En otros orígenes destinos los costos de referencia se deben ajustar de manera proporcional a los kilómetros recorridos. En otras configuraciones se deben ajustar los costos de acuerdo a la configuración del vehículo.

Costo de referencia de un viaje en un tractocamión

A. **Costo de traslado de la carga:** costo de movilizar el vehículo en un origen destino (no incluye el costo de las horas de espera, carga y descarga).

Destino																														
Origen	ARMENIA	BARRANQUILLA	BOGOTA	BUCARAMANGA	BUENAVENTURA	CALI	CARTAGENA	CARTAGO (VALLE)	CUCUTA	DUITAMA	FLORENCIA	IBAGUE	IPALES-NARIÑO	MANIZALES	MEDELLÍN	MOCOA	MONTERIA	NEIVA	PASTO	PEREIRA	POPAYAN	RIOHACHA	SANTA MARTA	SINCELEJO	SOGAMOSO-BOYACA	TUMACO	VALLEDUPAR	VILLAVICENCIO	YOPAL	
ARMENIA	\$ 0.00	\$ 5,042,367.75	\$ 1,759,650.65	\$ 3,105,047.14	\$ 1,271,181.12	\$ 862,585.33	\$ 4,876,133.86	\$ 212,739.17	\$ 4,428,311.38	\$ 3,211,073.64	\$ 2,784,883.63	\$ 546,500.17	\$ 3,766,256.96	\$ 553,723.05	\$ 1,829,431.09	\$ 3,260,410.01	\$ 3,700,306.48	\$ 1,560,986.82	\$ 3,180,060.55	\$ 230,232.93	\$ 1,654,219.96	\$ 6,520,015.46	\$ 5,092,003.91	\$ 0,020,023.64	\$ 2,965,632.79	\$ 4,801,180.98	\$ 5,175,422.96	\$ 2,671,919.66	\$ 3,796,555.15	
BARRANQUILLA	\$ 5,042,367.75	\$ 0.00	\$ 4,810,635.19	\$ 2,937,520.04	\$ 6,120,070.43	\$ 5,710,856.81	\$ 4,980,415.38	\$ 4,960,967.96	\$ 3,383,813.41	\$ 5,111,704.84	\$ 7,716,343.74	\$ 8,716,748.05	\$ 8,553,820.97	\$ 4,451,987.48	\$ 3,828,209.56	\$ 1,962,982.03	\$ 1,729,601.73	\$ 5,644,201.44	\$ 8,021,387.74	\$ 6,611,988.20	\$ 6,424,519.40	\$ 1,455,560.64	\$ 407,330.23	\$ 1,109,307.62	\$ 4,981,318.08	\$ 9,506,634.27	\$ 1,687,674.00	\$ 2,748,638.27	\$ 5,956,595.91	
BOGOTA	\$ 1,759,650.65	\$ 4,810,635.19	\$ 0.00	\$ 2,121,425.00	\$ 3,050,043.62	\$ 2,634,536.04	\$ 4,653,947.90	\$ 1,876,547.93	\$ 3,383,882.08	\$ 1,275,274.83	\$ 2,883,495.13	\$ 1,074,353.76	\$ 5,502,350.87	\$ 1,699,792.61	\$ 2,138,882.16	\$ 3,359,122.94	\$ 4,106,448.27	\$ 1,613,963.17	\$ 4,966,111.35	\$ 1,893,906.30	\$ 3,389,894.28	\$ 6,060,957.88	\$ 4,559,045.60	\$ 4,425,893.86	\$ 1,115,310.02	\$ 6,636,543.35	\$ 4,716,063.26	\$ 738,122.93	\$ 2,085,657.73	
BUCARAMANGA	\$ 3,105,047.14	\$ 2,937,520.04	\$ 2,057,888.67	\$ 0.00	\$ 4,500,037.30	\$ 4,026,462.02	\$ 3,124,706.69	\$ 3,132,166.26	\$ 1,184,552.53	\$ 2,127,812.13	\$ 5,718,552.53	\$ 2,523,320.59	\$ 6,995,623.19	\$ 2,708,950.11	\$ 2,415,292.87	\$ 5,734,966.87	\$ 3,872,691.03	\$ 3,893,627.59	\$ 6,458,573.89	\$ 2,954,207.31	\$ 4,507,942.66	\$ 7,327,918.17	\$ 2,570,056.23	\$ 3,252,090.89	\$ 1,755,240.90	\$ 6,175,672.73	\$ 2,481,854.58	\$ 3,122,134.93	\$ 3,020,763.73	
BUENAVENTURA	\$ 1,271,181.12	\$ 6,120,070.43	\$ 3,050,043.62	\$ 4,500,037.30	\$ 0.00	\$ 874,919.78	\$ 5,792,265.50	\$ 1,262,525.51	\$ 5,178,552.53	\$ 4,501,278.10	\$ 3,566,687.57	\$ 1,843,455.74	\$ 6,995,623.19	\$ 1,766,069.11	\$ 2,839,022.92	\$ 5,734,966.87	\$ 3,872,691.03	\$ 3,893,627.59	\$ 6,458,573.89	\$ 2,954,207.31	\$ 4,507,942.66	\$ 7,327,918.17	\$ 2,570,056.23	\$ 3,252,090.89	\$ 1,755,240.90	\$ 6,175,672.73	\$ 2,481,854.58	\$ 3,122,134.93	\$ 3,020,763.73	
CALI	\$ 862,585.33	\$ 5,710,856.81	\$ 2,634,536.04	\$ 4,026,462.02	\$ 4,026,462.02	\$ 0.00	\$ 5,544,016.16	\$ 0.00	\$ 5,544,016.16	\$ 985,228.68	\$ 5,295,084.87	\$ 4,142,245.74	\$ 2,080,594.15	\$ 1,438,678.89	\$ 2,833,322.42	\$ 1,366,530.09	\$ 2,440,802.86	\$ 2,044,520.19	\$ 4,502,513.34	\$ 1,810,259.86	\$ 2,299,001.43	\$ 979,365.19	\$ 576,986.20	\$ 7,466,411.68	\$ 5,888,796.09	\$ 4,822,886.41	\$ 3,994,259.03	\$ 3,834,253.53	\$ 6,121,925.17	\$ 4,642,863.89
CARTAGENA	\$ 4,876,133.86	\$ 4,980,415.38	\$ 4,653,947.90	\$ 3,124,706.69	\$ 5,792,265.50	\$ 5,544,016.16	\$ 0.00	\$ 4,740,195.44	\$ 3,425,533.20	\$ 5,176,064.73	\$ 7,496,391.34	\$ 6,625,750.54	\$ 3,389,266.65	\$ 4,285,315.59	\$ 3,320,735.32	\$ 7,970,073.56	\$ 1,440,399.09	\$ 4,500,981.81	\$ 7,853,993.04	\$ 4,483,358.25	\$ 6,334,334.58	\$ 2,118,677.63	\$ 929,258.67	\$ 874,592.17	\$ 5,279,973.94	\$ 7,909,986.63	\$ 1,985,880.85	\$ 5,560,268.77	\$ 5,697,488.76	
CARTAGO (VALLE)	\$ 212,739.17	\$ 4,932,361.32	\$ 1,239,888.04	\$ 3,142,071.65	\$ 5,275,587.38	\$ 872,064.94	\$ 4,674,814.51	\$ 0.00	\$ 4,397,885.79	\$ 3,093,452.60	\$ 3,026,227.73	\$ 772,948.17	\$ 3,515,541.62	\$ 4,886,316.96	\$ 1,567,971.28	\$ 3,502,147.12	\$ 3,517,468.12	\$ 3,140,308.89	\$ 1,084,021.25	\$ 1,671,029.65	\$ 2,181,674.63	\$ 5,025,619.33	\$ 2,087,216.62	\$ 3,206,882.22	\$ 4,821,177.89	\$ 5,135,328.81	\$ 2,892,913.04	\$ 4,012,543.23	\$ 4,262,543.20	
CUCUTA	\$ 4,428,311.38	\$ 2,324,508.91	\$ 3,338,345.74	\$ 1,184,552.53	\$ 5,718,282.15	\$ 2,958,084.87	\$ 3,425,533.20	\$ 1,817,497.69	\$ 0.00	\$ 3,297,914.92	\$ 6,280,029.12	\$ 3,807,349.30	\$ 8,232,629.10	\$ 4,008,978.02	\$ 3,565,165.48	\$ 4,220,109.78	\$ 5,164,333.44	\$ 6,696,546.80	\$ 1,024,069.29	\$ 5,676,778.03	\$ 4,206,757.76	\$ 2,991,798.78	\$ 3,599,740.54	\$ 5,766,446.31	\$ 8,683,553.70	\$ 2,888,008.26	\$ 3,381,270.86	\$ 4,461,614.20	\$ 4,012,543.20	
DUITAMA	\$ 3,165,537.31	\$ 5,111,704.84	\$ 876,716.73	\$ 2,127,812.13	\$ 4,455,741.76	\$ 4,096,709.41	\$ 5,176,064.73	\$ 3,047,916.27	\$ 3,297,914.92	\$ 0.00	\$ 4,054,969.69	\$ 2,223,550.04	\$ 6,681,262.67	\$ 2,745,011.29	\$ 3,080,790.57	\$ 4,530,528.67	\$ 5,206,179.86	\$ 3,116,927.26	\$ 5,977,619.39	\$ 3,014,490.77	\$ 4,505,071.29	\$ 5,514,448.23	\$ 4,740,357.63	\$ 5,525,260.40	\$ 113,282.27	\$ 7,537,863.50	\$ 4,168,365.52	\$ 1,910,937.51	\$ 900,167.74	
FLORENCIA	\$ 2,784,883.63	\$ 7,716,343.74	\$ 2,883,495.13	\$ 5,304,251.87	\$ 3,056,687.57	\$ 2,080,594.15	\$ 7,496,391.34	\$ 3,026,227.73	\$ 6,305,565.45	\$ 4,100,506.02	\$ 2,240,893.08	\$ 3,190,286.33	\$ 3,387,116.14	\$ 4,183,877.27	\$ 1,353,256.18	\$ 6,272,951.91	\$ 1,155,770.98	\$ 7,396,591.12	\$ 3,033,491.83	\$ 1,400,327.35	\$ 8,227,469.41	\$ 7,276,080.98	\$ 5,693,442.13	\$ 4,213,570.32	\$ 4,197,016.16	\$ 6,883,193.69	\$ 3,660,576.35	\$ 5,060,151.23	\$ 4,012,543.20	
IBAGUE	\$ 546,500.17	\$ 4,910,505.83	\$ 1,074,353.76	\$ 2,523,320.59	\$ 1,843,455.74	\$ 1,438,678.89	\$ 4,660,508.32	\$ 662,598.33	\$ 3,307,349.30	\$ 2,269,086.37	\$ 2,240,893.08	\$ 0.00	\$ 4,297,951.62	\$ 1,128,234.65	\$ 2,307,140.12	\$ 2,716,358.37	\$ 4,032,953.93	\$ 894,213.88	\$ 3,763,662.78	\$ 809,505.98	\$ 2,086,985.27	\$ 5,987,203.56	\$ 4,447,822.13	\$ 4,534,041.84	\$ 5,121,365.16	\$ 5,384,948.35	\$ 4,642,308.93	\$ 1,982,717.72	\$ 3,298,130.92	
IPALES-NARIÑO	\$ 3,766,256.96	\$ 8,553,820.97	\$ 5,002,350.87	\$ 1,507,365.76	\$ 6,995,623.19	\$ 3,793,995.41	\$ 2,833,322.42	\$ 3,889,266.65	\$ 3,551,401.06	\$ 8,232,629.10	\$ 6,726,799.00	\$ 3,190,286.33	\$ 4,297,951.62	\$ 0.00	\$ 4,319,535.44	\$ 5,295,320.12	\$ 1,194,998.92	\$ 7,033,647.44	\$ 2,329,053.86	\$ 6,003,638.85	\$ 1,800,454.93	\$ 9,985,915.89	\$ 9,024,522.60	\$ 7,353,273.70	\$ 6,623,916.04	\$ 1,130,184.53	\$ 8,649,534.91	\$ 5,431,714.54	\$ 7,736,845.65	
MANIZALES	\$ 553,723.05	\$ 4,451,987.48	\$ 1,699,792.61	\$ 2,708,950.11	\$ 1,766,069.11	\$ 1,356,530.09	\$ 4,285,315.59	\$ 466,400.76	\$ 4,008,978.02	\$ 2,790,547.58	\$ 3,387,116.14	\$ 1,128,234.65	\$ 4,319,535.44	\$ 0.00	\$ 1,178,970.17	\$ 3,862,571.57	\$ 3,152,417.86	\$ 2,213,002.88	\$ 3,794,531.27	\$ 3,033,618.62	\$ 2,201,467.96	\$ 6,015,409.86	\$ 4,524,307.45	\$ 3,472,205.15	\$ 2,753,280.32	\$ 5,340,359.35	\$ 4,669,032.46	\$ 2,150,116.63	\$ 3,753,175.37	
MEDELLÍN	\$ 1,829,431.09	\$ 3,488,209.56	\$ 2,138,882.16	\$ 2,415,292.87	\$ 2,839,022.92	\$ 4,026,462.02	\$ 3,230,735.32	\$ 1,363,237.35	\$ 6,305,855.42	\$ 3,126,326.90	\$ 4,183,877.27	\$ 2,307,140.12	\$ 5,295,320.12	\$ 1,178,970.17	\$ 0.00	\$ 4,895,829.02	\$ 2,013,455.52	\$ 2,661,399.62	\$ 4,762,351.51	\$ 1,360,710.01	\$ 3,246,029.49	\$ 5,461,920.79	\$ 4,195,249.67	\$ 4,209,651.90	\$ 3,514,592.80	\$ 6,608,294.87	\$ 4,091,261.64	\$ 3,020,784.64	\$ 4,202,448.65	
MOCOA	\$ 3,056,707.60	\$ 7,581,370.33	\$ 3,091,839.20	\$ 5,146,738.88	\$ 2,868,637.07	\$ 1,963,862.75	\$ 7,360,298.47	\$ 3,298,444.70	\$ 6,092,691.43	\$ 4,166,631.31	\$ 3,126,491.67	\$ 2,539,420.65	\$ 1,130,327.64	\$ 3,658,869.15	\$ 5,002,109.30	\$ 4,037,998.67	\$ 7,100,083.67	\$ 3,239,430.22	\$ 1,361,043.24	\$ 8,042,740.68	\$ 7,184,123.93	\$ 6,047,768.63	\$ 7,164,184.12	\$ 5,631,907.66	\$ 4,255,022.65	\$ 2,134,900.32	\$ 6,842,617.75	\$ 3,658,869.15	\$ 4,910,903.82	
MONTERIA	\$ 3,700,306.48	\$ 1,674,805.67	\$ 4,106,448.27	\$ 3,817,953.00	\$ 4,779,671.43	\$ 4,502,513.34	\$ 1,440,399.09	\$ 5,173,468.72	\$ 4,165,852.72	\$ 5,251,716.19	\$ 6,272,951.91	\$ 4,032,693.95	\$ 7,033,647.44	\$ 3,152,417.86	\$ 2,013,455.52	\$ 6,908,412.54	\$ 0.00	\$ 5,238,832.24	\$ 3,645,817.67	\$ 3,234,223.99	\$ 5,119,857.70	\$ 3,666,572.63	\$ 2,699,684.91	\$ 5,397,397.06	\$ 4,528,628.70	\$ 7,903,799.51	\$ 2,295,109.50	\$ 5,065,107.06	\$ 1,105,364.80	
NEIVA	\$ 1,560,986.82	\$ 5,588,249.89	\$ 1,669,914.73	\$ 3,939,163.92	\$ 2,889,699.25	\$ 1,810,259.86	\$ 5,371,774.96	\$ 1,831,132.71	\$ 5,209,869.78	\$ 3,162,463.59	\$ 1,155,770.98	\$ 894,213.88	\$ 3,239,053.86	\$ 2,213,002.88	\$ 2,661,399.67	\$ 1,631,186.02	\$ 5,238,832.24	\$ 0.00	\$ 2,729,108.31	\$ 1,809,855.97	\$ 1,316,541.73	\$ 7,028,357.25	\$ 5,254,700.92	\$ 5,558,840.05	\$ 3,018,538.20	\$ 4,591,484.68	\$ 5,658,733.56	\$ 2,523,632.88	\$ 3,833,989.48	
PASTO	\$ 3,180,060.55	\$ 8,021,387.74	\$ 4,966,111.35	\$ 6,458,573.89	\$ 3,260,203.10	\$ 2,299,001.43	\$ 7,853,993.04	\$ 3,061,614.22	\$ 7,696,546.80	\$ 6,023,155.72	\$ 2,736,591.71	\$ 3,763,662.78	\$ 500,638.85	\$ 3,794,531.27	\$ 4,762,351.51	\$ 710,083.67	\$ 6,445,817.62	\$ 7,279,108.31	\$ 0.00	\$ 3,290,953.92	\$ 1,268,176.84	\$ 9,923,780.74	\$ 4,849,936.61	\$ 6,764,964.49	\$ 5,979,973.93	\$ 1,582,547.92	\$ 8,121,434.95	\$ 5,877,784.24	\$ 7,198,227.87	
PEREIRA	\$ 230,232.93	\$ 4,651,988.20	\$ 1,893,906.30	\$ 2,954,207.31	\$ 1,383,411.03	\$ 979,365.19	\$ 4,843,358.25	\$ 125,931.34	\$ 2,244,066.29	\$ 3,060,027.10	\$ 3,033,491.83	\$ 809,505.98	\$ 3,824,939.34	\$ 303,618.62	\$ 1,350,710.01	\$ 3,499,568.63	\$ 3,139,570.17	\$ 1,809,855.97	\$ 3,290,953.92	\$ 0.00	\$ 1,823,245.31	\$ 6,290,362.08	\$ 4,861,512.04	\$ 3,558,659.08	\$ 4,037,564.70	\$ 4,821,887.92	\$ 9,495,345.54	\$ 2,789,046.50	\$ 3,756,673.14	
POPAYAN	\$ 1,654,219.96	\$ 6,424,519.40	\$ 1,889,894.28	\$ 4,507,942.66	\$ 1,610,940.11	\$ 7,968,96.20	\$ 6,334,334.58	\$ 1,671,029.65	\$ 5,678,776.03	\$ 4,550,607.62	\$ 1,400,327.35	\$ 2,086,985.27	\$ 1,800,454.93	\$ 2,201,467.96	\$ 3,260,029.49	\$ 1,361,043.24	\$ 2,119,857.70	\$ 1,316,541.73	\$ 1,268,176.84	\$ 1,823,245.31	\$ 0.00	\$ 6,196,024.12	\$ 7,262,632.63	\$ 4,438,787.50	\$ 5,632,445.65	\$ 4,084,966.56	\$ 6,824,854.08	\$ 3,738,754.48	\$ 5,564,603.50	
RIOHACHA	\$ 6,520,015.46	\$ 1,455,560.64	\$ 6,060,957.88	\$ 3,827,918.17	\$ 7,742,987.10	\$ 7,466,411.68	\$ 2,118,677.63	\$ 6,481,754.65	\$ 4,234,491.32	\$ 5,514,448.23	\$ 8,227,469.41	\$ 5,987,203.56	\$ 9,995,915.89	\$ 6,015,409.86	\$ 5,461,920.79	\$ 8,727,965.60	\$ 3,720,833.68	\$ 7,056,090.82	\$ 9,523,780.74	\$ 6,290,362.08	\$ 8,196,024.13	\$ 0.00	\$ 897,589.35	\$ 3,129,120.69	\$ 5,823,690.03	\$ 10,985,660.81	\$ 1,087,147.12	\$ 6,876,229.41	\$ 6,589,604.11	
SANTA MARTA	\$ 5,092,003.91	\$ 407,330.23	\$ 4,559,045.60	\$ 2,570,056.23	\$ 6,335,564.68	\$ 5,888,796.09	\$ 929,258.97	\$ 5,529,905.09	\$ 2,991,798.78	\$ 4,740,357.63	\$ 7,276,080.98	\$ 4,393,444.97	\$ 9,024,522.60	\$ 4,524,307.45	\$ 4,195,249.67	\$ 7,760,594.52	\$ 2,753,940.76	\$ 5,282,434.49	\$ 4,849,936.61	\$ 4,861,512.04	\$ 7,116,822.48	\$ 897,589.35	\$ 0.00	\$ 2,162,222.46	\$ 4,856,477.73	\$ 10,335,203.56	\$ 1,392,049.12	\$ 4,496,644.14	\$ 6,689,915.87	
SINCELEJO	\$ 2,020,023.64	\$ 1,109,307.62	\$ 4,425,																											

B. Costo del viaje de una hora hábil adicional de espera, carga y descarga: \$29.014

A diferencia de los costos de traslado, estos costos se producen cuando el vehículo está apagado mientras se espera o ejecuta el cargue y descargue. Se habla de horas hábiles porque los costos se calculan asumiendo que el vehículo sólo opera 12 horas diarias. Por ejemplo, si se trabaja entre las 6am y las 6pm, NO se deben contar como horas de espera, carga y descarga el tiempo que está fuera de este horario.

C. ¿Cómo se calcula el costo del viaje?

$$\text{Costo del viaje} = \text{Costos de traslado de la carga} + (\text{Horas de espera, carga y descarga}) \times \$29.014$$

D. ¿Cómo calcular el costo total por tonelada?

$$\text{Costo por tonelada} = \frac{\text{Costo de traslado de la carga} + (\text{Horas de espera, carga y descarga}) \times \$29.014}{34}$$

Nota: En otros orígenes destinos los costos de referencia se deben ajustar de manera proporcional a los kilómetros recorridos. En otras configuraciones se deben ajustar los costos de acuerdo a la configuración del vehículo.

A. **Costo de traslado por tonelada:** costo de movilizar el vehículo en un origen destino (excluye el costo de las horas de espera, carga y descarga):

B. Costo por tonelada de una hora hábil adicional de espera, carga y descarga: \$1.454

C. ¿Cómo calcular el costo total por tonelada?

D. ¿Cómo calcular el costo del viaje?

$$\text{Costo del viaje} = \text{Costo por tonelada} \times 16$$

A. **Costo de traslado por tonelada:** costo de movilizar el vehículo en un origen destino (excluye el costo de las horas de espera, carga y descarga):

	Destino																														
Origen	ARMENIA	BARRANQUILLA	BOGOTA	BUARAMANGA	BUENAVENTURA	CAU	CARTAGENA	CARTAGO (VALLE)	CUCUTA	DUITAMA	FLORENCIA	IBAGUE	IPIALES-NARIÑO	MANIZALES	MEDELLÍN	MOCOA	MONTERIA	NEIVA	PASTO	PEREIRA	POPAYAN	RIOHACHA	SANTA MARTA	SINCELEJO	SOGAMOSO-BOYACA	TUMACO	VALLEDUPAR	VILLAVICENCIO	YOPAL		
ARMENIA	\$ 0.00	\$ 308,478.23	\$ 105,728.21	\$ 189,180.82	\$ 75,274.92	\$ 48,124.88	\$ 297,187.05	\$ 13,458.81	\$ 272,883.69	\$ 915,044.60	\$ 171,257.70	\$ 34,580.72	\$ 228,487.68	\$ 31,775.71	\$ 112,543.89	\$ 200,631.04	\$ 225,922.25	\$ 94,039.59	\$ 191,406.87	\$ 12,885.91	\$ 95,957.45	\$ 395,208.92	\$ 303,557.22	\$ 246,195.12	\$ 177,724.85	\$ 293,876.65	\$ 315,193.93	\$ 164,481.10	\$ 232,200.51		
BARRANQUILLA	\$ 308,478.23	\$ 0.00	\$ 285,144.21	\$ 174,221.82	\$ 372,928.49	\$ 345,746.02	\$ 27,744.90	\$ 304,585.52	\$ 200,249.83	\$ 304,818.34	\$ 473,163.17	\$ 292,561.31	\$ 521,765.14	\$ 272,632.43	\$ 215,137.01	\$ 502,606.75	\$ 106,782.04	\$ 335,867.90	\$ 488,550.37	\$ 283,724.79	\$ 387,673.40	\$ 88,215.15	\$ 23,967.07	\$ 69,042.86	\$ 297,359.73	\$ 580,929.36	\$ 100,404.25	\$ 345,790.41	\$ 357,497.18		
BOGOTA	\$ 105,728.21	\$ 285,144.21	\$ 0.00	\$ 121,760.48	\$ 182,149.62	\$ 154,514.61	\$ 275,433.83	\$ 112,611.81	\$ 201,586.45	\$ 78,456.18	\$ 175,277.69	\$ 62,290.86	\$ 332,267.95	\$ 104,800.10	\$ 128,136.49	\$ 204,656.59	\$ 248,495.19	\$ 94,952.17	\$ 298,787.55	\$ 114,748.72	\$ 199,731.69	\$ 367,363.68	\$ 270,730.39	\$ 269,948.20	\$ 66,771.36	\$ 405,006.82	\$ 287,330.29	\$ 47,524.04	\$ 130,783.05		
BUARAMANGA	\$ 189,180.82	\$ 174,221.82	\$ 119,419.08	\$ 0.00	\$ 272,549.47	\$ 240,843.46	\$ 185,151.51	\$ 190,033.12	\$ 74,626.54	\$ 127,917.38	\$ 314,793.21	\$ 153,013.40	\$ 425,709.96	\$ 166,436.51	\$ 149,167.04	\$ 344,212.49	\$ 235,273.94	\$ 227,153.53	\$ 392,178.12	\$ 179,941.35	\$ 268,891.63	\$ 230,883.54	\$ 151,626.31	\$ 197,511.23	\$ 102,787.68	\$ 462,025.87	\$ 150,772.64	\$ 186,725.14	\$ 183,685.05		
BUENAVENTURA	\$ 75,274.92	\$ 372,928.49	\$ 182,149.62	\$ 272,549.47	\$ 0.00	\$ 52,708.17	\$ 202,562.19	\$ 76,394.25	\$ 349,275.65	\$ 127,499.15	\$ 188,040.31	\$ 111,461.80	\$ 233,572.82	\$ 104,721.79	\$ 172,462.59	\$ 185,759.02	\$ 209,729.50	\$ 175,905.04	\$ 200,266.18	\$ 82,130.09	\$ 96,151.97	\$ 469,155.52	\$ 378,678.21	\$ 312,249.48	\$ 255,426.36	\$ 302,222.44	\$ 389,164.63	\$ 240,589.91	\$ 321,980.94		
CAU	\$ 48,124.88	\$ 345,746.02	\$ 154,514.61	\$ 240,843.46	\$ 52,708.17	\$ 0.00	\$ 334,404.87	\$ 58,395.73	\$ 321,101.85	\$ 247,786.26	\$ 128,729.91	\$ 84,577.41	\$ 175,530.99	\$ 77,507.27	\$ 146,038.01	\$ 126,447.75	\$ 272,740.07	\$ 109,541.30	\$ 142,186.26	\$ 55,303.23	\$ 32,937.20	\$ 451,204.16	\$ 348,866.80	\$ 294,253.43	\$ 237,492.38	\$ 238,562.90	\$ 371,196.07	\$ 213,302.51	\$ 278,971.07		
CARTAGENA	\$ 298,384.67	\$ 27,744.90	\$ 276,631.45	\$ 185,151.51	\$ 351,449.80	\$ 335,602.49	\$ 0.00	\$ 290,631.47	\$ 205,834.93	\$ 307,554.24	\$ 459,244.81	\$ 276,533.03	\$ 511,780.22	\$ 262,501.86	\$ 204,952.84	\$ 488,496.47	\$ 91,180.56	\$ 320,314.93	\$ 478,378.97	\$ 273,460.74	\$ 383,085.69	\$ 128,518.74	\$ 54,240.22	\$ 52,968.76	\$ 316,189.71	\$ 597,156.94	\$ 119,203.59	\$ 335,067.53	\$ 337,198.70		
CARTAGO (VALLE)	\$ 13,458.81	\$ 302,035.83	\$ 129,954.11	\$ 190,097.65	\$ 77,079.51	\$ 50,286.73	\$ 284,322.26	\$ 0.00	\$ 269,151.78	\$ 185,810.27	\$ 286,526.18	\$ 48,778.60	\$ 213,061.94	\$ 27,378.40	\$ 96,697.55	\$ 215,924.13	\$ 214,356.37	\$ 107,809.24	\$ 190,118.80	\$ 5,064.36	\$ 98,885.64	\$ 382,845.80	\$ 299,193.97	\$ 233,929.58	\$ 192,986.06	\$ 276,681.19	\$ 312,711.15	\$ 178,300.55	\$ 245,675.06		
CUCUTA	\$ 272,883.69	\$ 195,418.99	\$ 199,245.04	\$ 74,626.54	\$ 349,275.65	\$ 321,101.85	\$ 205,834.39	\$ 255,288.76	\$ 0.00	\$ 201,329.57	\$ 376,632.00	\$ 233,982.25	\$ 503,765.54	\$ 248,526.85	\$ 208,079.26	\$ 405,978.73	\$ 259,695.09	\$ 307,552.86	\$ 470,301.92	\$ 259,927.66	\$ 340,340.06	\$ 258,005.52	\$ 180,826.80	\$ 221,914.61	\$ 164,620.23	\$ 542,230.91	\$ 178,941.78	\$ 266,315.79	\$ 262,067.54		
DUITAMA	\$ 192,703.20	\$ 304,818.34	\$ 51,530.15	\$ 127,917.38	\$ 269,157.74	\$ 245,448.54	\$ 307,554.24	\$ 183,468.87	\$ 201,329.57	\$ 0.00	\$ 246,141.42	\$ 131,308.30	\$ 430,566.05	\$ 167,217.58	\$ 183,276.53	\$ 275,515.81	\$ 134,820.94	\$ 186,788.88	\$ 358,434.52	\$ 182,588.07	\$ 266,595.45	\$ 329,325.45	\$ 282,032.42	\$ 336,249.81	\$ 7,166.15	\$ 456,946.09	\$ 249,213.18	\$ 118,020.75	\$ 56,273.48		
FLORENCIA	\$ 171,257.70	\$ 473,163.17	\$ 175,277.69	\$ 317,134.61	\$ 288,104.31	\$ 128,729.91	\$ 458,047.19	\$ 186,526.18	\$ 378,973.41	\$ 248,482.83	\$ 0.00	\$ 137,554.30	\$ 199,317.26	\$ 339,357.27	\$ 234,390.83	\$ 84,900.49	\$ 382,940.94	\$ 171,513.13	\$ 285,299.32	\$ 188,598.95	\$ 501,809.20	\$ 444,439.60	\$ 430,263.60	\$ 255,634.74	\$ 263,003.50	\$ 281,627.92	\$ 311,897.47				
IBAGUE	\$ 34,580.72	\$ 293,947.31	\$ 62,290.86	\$ 153,013.40	\$ 111,461.80	\$ 84,577.41	\$ 276,721.42	\$ 41,206.98	\$ 233,982.25	\$ 133,649.71	\$ 137,554.30	\$ 0.00	\$ 261,727.67	\$ 68,174.95	\$ 141,886.68	\$ 166,922.57	\$ 245,427.14	\$ 51,902.61	\$ 228,382.49	\$ 48,613.11	\$ 122,438.02	\$ 364,296.63	\$ 263,225.39	\$ 277,189.53	\$ 144,002.24	\$ 330,720.20	\$ 284,262.24	\$ 120,768.89	\$ 201,783.42		
IPIALES-NARIÑO	\$ 228,487.68	\$ 521,765.14	\$ 332,267.95	\$ 425,709.96	\$ 233,572.82	\$ 175,530.99	\$ 510,582.61	\$ 213,061.94	\$ 503,765.54	\$ 405,907.46	\$ 199,312.78	\$ 261,727.67	\$ 0.00	\$ 261,866.48	\$ 322,854.83	\$ 73,796.14	\$ 427,460.02	\$ 201,673.56	\$ 31,178.61	\$ 231,494.48	\$ 111,481.57	\$ 605,816.45	\$ 545,640.14	\$ 447,725.80	\$ 392,114.65	\$ 70,860.79	\$ 525,685.66	\$ 390,953.61	\$ 472,497.51		
MANIZALES	\$ 31,775.71	\$ 272,632.43	\$ 104,800.10	\$ 168,436.51	\$ 104,721.79	\$ 77,507.27	\$ 261,304.25	\$ 26,805.40	\$ 248,526.85	\$ 209,357.27	\$ 68,174.95	\$ 261,866.48	\$ 0.00	\$ 272,714.95	\$ 238,725.99	\$ 192,982.02	\$ 135,512.76	\$ 229,175.84	\$ 17,530.14	\$ 129,003.73	\$ 366,793.05	\$ 270,802.63	\$ 213,240.14	\$ 166,640.78	\$ 326,324.50	\$ 286,661.35	\$ 131,536.65	\$ 232,832.40			
MEDELLÍN	\$ 112,543.89	\$ 215,137.01	\$ 128,136.49	\$ 149,167.04	\$ 172,462.59	\$ 146,038.01	\$ 203,755.23	\$ 81,722.35	\$ 208,079.26	\$ 185,617.94	\$ 254,430.89	\$ 181,886.68	\$ 322,854.83	\$ 72,714.95	\$ 0.00	\$ 286,760.30	\$ 132,727.05	\$ 156,143.67	\$ 228,603.15	\$ 81,854.77	\$ 194,779.13	\$ 331,815.52	\$ 261,395.01	\$ 148,838.40	\$ 210,915.29	\$ 407,697.50	\$ 250,147.46	\$ 184,866.55	\$ 256,890.52		
MOCOA	\$ 193,378.06	\$ 479,623.28	\$ 195,600.46	\$ 325,602.34	\$ 181,479.90	\$ 124,240.91	\$ 465,634.11	\$ 208,671.15	\$ 385,444.32	\$ 263,593.48	\$ 83,918.18	\$ 160,651.90	\$ 71,508.56	\$ 231,473.01	\$ 284,819.50	\$ 0.00	\$ 403,605.19	\$ 99,823.01	\$ 44,922.32	\$ 204,937.35	\$ 86,105.08	\$ 508,811.90	\$ 454,492.19	\$ 423,934.13	\$ 269,186.01	\$ 135,060.59	\$ 432,884.47	\$ 231,473.01	\$ 310,680.20		
MONTERIA	\$ 225,922.25	\$ 106,015.03	\$ 284,495.19	\$ 234,506.94	\$ 209,729.50	\$ 272,740.07	\$ 91,180.56	\$ 214,356.37	\$ 228,528.08	\$ 317,162.34	\$ 32,940.94	\$ 245,427.14	\$ 427,460.02	\$ 192,962.40	\$ 123,727.05	\$ 422,430.64	\$ 0.00	\$ 318,242.10	\$ 139,172.08	\$ 196,319.27	\$ 308,901.67	\$ 223,039.74	\$ 164,686.12	\$ 35,194.81	\$ 334,681.61	\$ 421,322.75	\$ 308,959.04	\$ 373,179.50			
NEIVA	\$ 94,039.59	\$ 303,930.19	\$ 98,885.95	\$ 326,994.93	\$ 175,905.04	\$ 109,541.30	\$ 319,359.53	\$ 111,462.96	\$ 309,894.26	\$ 189,130.29	\$ 72,395.47	\$ 51,902.61	\$ 131,763.56	\$ 195,512.76	\$ 123,637.05	\$ 101,760.73	\$ 318,242.10	\$ 0.00	\$ 170,034.31	\$ 108,095.89	\$ 82,659.65	\$ 427,417.84	\$ 311,719.07	\$ 339,731.89	\$ 180,755.61	\$ 289,075.88	\$ 345,820.73	\$ 153,522.26	\$ 234,185.60		
PASTO	\$ 191,406.87	\$ 488,550.37	\$ 298,787.55	\$ 392,178.12	\$ 200,266.18	\$ 142,186.26	\$ 477,181.35	\$ 185,246.01	\$ 470,301.92	\$ 360,775.93	\$ 171,513.13	\$ 228,382.49	\$ 31,178.61	\$ 229,175.84	\$ 289,603.15	\$ 44,922.32	\$ 391,172.08	\$ 170,034.31	\$ 0.00	\$ 198,170.75	\$ 78,278.43	\$ 576,856.53	\$ 512,282.73	\$ 411,407.68	\$ 358,607.99	\$ 100,515.96	\$ 493,924.81	\$ 357,496.47	\$ 438,852.46		
PEREIRA	\$ 12,885.91	\$ 283,724.79	\$ 114,748.72	\$ 179,941.35	\$ 82,130.09	\$ 55,303.23	\$ 272,263.12	\$ 6,337.04	\$ 259,927.66	\$ 184,929.48	\$ 185,299.32	\$ 49,613.11	\$ 231,494.48	\$ 17,530.14	\$ 81,854.77	\$ 210,472.02	\$ 196,628.33	\$ 108,095.89	\$ 198,170.75	\$ 0.00	\$ 106,739.64	\$ 382,365.23	\$ 290,653.76	\$ 216,889.45	\$ 182,806.39	\$ 294,556.23	\$ 302,322.68	\$ 172,403.00	\$ 229,511.44		
POPAYAN	\$ 95,957.45	\$ 387,673.40	\$ 199,731.69	\$ 266,881.63	\$ 96,151.97	\$ 32,937.20	\$ 381,888.07	\$ 98,885.64	\$ 340,340.06	\$ 368,936.86	\$ 88,589.95	\$ 122,438.02	\$ 111,481.57	\$ 129,003.73	\$ 194,779.13	\$ 86,105.08	\$ 308,901.67	\$ 82,659.65	\$ 78,278.43	\$ 106,739.64	\$ 0.00	\$ 494,467.52	\$ 433,804.09	\$ 329,122.24	\$ 276,233.86	\$ 194,072.26	\$ 412,770.02	\$ 264,230.09	\$ 335,074.19		
RIOHACHA	\$ 395,208.92	\$ 88,215.15	\$ 367,363.68	\$ 230,883.54	\$ 469,155.52	\$ 451,204.16	\$ 128,518.74	\$ 392,845.80	\$ 329,193.97	\$ 364,295.63	\$ 505,816.45	\$ 366,793.05	\$ 331,815.52	\$ 352,764.23	\$ 238,006.76	\$ 428,427.07	\$ 576,856.53	\$ 382,365.23	\$ 494,467.52	\$ 0.00	\$ 53,967.85	\$ 187,841.03	\$ 348,887.62	\$ 668,437.34	\$ 66,657.85	\$ 419,200.17	\$ 396,619.48				
SANTA MARTA	\$ 303,557.22	\$ 23,967.07	\$ 270,703.39	\$ 151,626.31	\$ 378,678.21	\$ 348,866.80	\$ 54,240.22	\$ 335,379.60	\$ 233,982.25	\$ 282,032.42	\$ 444,439.60	\$ 261,193.48	\$ 545,640.14	\$ 270,802.63	\$ 251,395.01	\$ 474,380.69	\$ 165,453.13	\$ 312,728.30	\$ 512,282.73	\$ 290,653.76	\$ 427,358.49	\$ 53,967.85	\$ 0.00	\$ 129,487.05	\$ 290,514.22	\$ 630,328.04	\$ 82,753.66	\$ 331,324.88	\$ 342,699.07		
SINCELEJO	\$ 246,195.12	\$ 69,042.86	\$ 268,750.58	\$ 197,511.23	\$ 131,051.87	\$ 293,055.81	\$ 52,989.76	\$ 190,644.65	\$ 237,393.60	\$ 337,393.60	\$ 447,725.80	\$ 263,682.62	\$ 212,914.61	\$ 148,838.40	\$ 242,759.58	\$ 35,194.81	\$ 338,534.27	\$ 211,407.68	\$ 216,607.60	\$ 329,122.24	\$ 187,841.03	\$ 129,487.05	\$ 0.00	\$ 354,943.03	\$ 502,755.38	\$ 106,122.79	\$ 329,286.66	\$ 54,488.81			
SOGAMOSO-BOYACA	\$ 175,383.44	\$ 288,983.40	\$ 57,598.83	\$ 113,961.09	\$ 254,450.58	\$ 202,123.38	\$ 271,854.83	\$ 190,644.65	\$ 292,154.33	\$ 7,166.15	\$ 323,293.33	\$ 137,197.61	\$ 389,773.24	\$ 171,842.61	\$ 209,353.17	\$ 282,655.98	\$ 332,240.24	\$ 165,605.56	\$ 371,270.57	\$ 166,325.24	\$ 275,591.16	\$ 348,887.62	\$ 285,412.18	\$ 352,601.62	\$ 453,493.15	\$ 267,167.82	\$ 116,883.40	\$ 54,439.87			
TUMACO	\$ 293,876.65	\$ 580,929.36	\$ 405,006.82	\$ 462,025.87	\$ 302,222.44	\$ 238,562.90	\$ 595,959.32	\$ 276,681.19	\$ 542,230.91	\$ 459,287.50	\$ 263,003.50	\$ 130,720.20	\$ 70,860.79	\$ 326,324.50	\$ 407,697.50	\$ 137,348.17	\$ 482,508.36	\$ 289,075.88	\$ 100,515.96	\$ 294,556.23	\$ 194,072.26	\$ 668,437.34	\$ 630,328.04	\$ 502,755.38	\$ 450,238.23	\$ 0.00	\$ 586,754.24	\$ 476,617.89	\$ 558,349.62		
VALLEDUPAR	\$ 315,193.93	\$ 100,404.25	\$ 287,330																												

A diferencia de los costos de traslado, estos costos se producen cuando el vehículo está apagado mientras se espera o ejecuta el cargue y descargue. Se habla de horas hábiles porque los costos se calculan asumiendo que el vehículo sólo opera 12 horas diarias. Por ejemplo, si se trabaja entre las 6am y las 6pm, NO se deben contar como horas de espera, carga y descarga el tiempo que está fuera de este horario.

$$\text{Costo por tonelada} = \text{Costo de traslado por tonelada} + (\text{Horas de espera, carga y descarga}) \times \$1.897$$
$$\text{Costo del viaje} = \text{Costo por tonelada} \times 9$$

Nota: En otros orígenes destinos los costos de referencia se deben ajustar de manera proporcional a los kilómetros recorridos. En otras configuraciones se deben ajustar los costos de acuerdo a la configuración del vehículo.

Costo de referencia de un **v**iaje en un Camión sencillo (dos ejes)

A. **Costo de traslado de la carga:** costo de movilizar el vehículo en un origen destino (no incluye el costo de las horas de espera, carga y descarga).

	Destino																												
Origen	ARMENIA	BARRANQUILLA	BOGOTA	BUCARAMANGA	BUENAVENTURA	CALI	CARTAGENA	CARTAGO (VALLE)	CUCUTA	DUITAMA	FLORENCIA	IBAGUE	IPIALES-NARIÑO	MANIZALES	MEDÉLLIN	MOCOA	MONTERIA	NEIVA	PASTO	PEREIRA	POPAYAN	RIOHACHA	SANTA MARTA	SINCELEJO	SOGAMOSO-BOYACA	TUMACO	VALLEDUPAR	VILLAVICENCIO	YOPAL
ARMENIA	\$ 0.00	\$ 2,776,304.05	\$ 951,553.88	\$ 1,702,627.40	\$ 677,474.30	\$ 433,123.94	\$ 2,474,683.46	\$ 121,129.30	\$ 2,455,953.20	\$ 1,755,401.43	\$ 1,541,319.28	\$ 311,226.50	\$ 2,056,389.11	\$ 285,981.38	\$ 1,012,894.98	\$ 1,805,679.33	\$ 2,033,300.25	\$ 846,356.29	\$ 1,722,661.82	\$ 115,973.17	\$ 863,617.05	\$ 3,556,880.32	\$ 2,732,015.01	\$ 1,599,523.62	\$ 2,644,889.86	\$ 2,836,745.40	\$ 1,480,329.90	\$ 2,089,804.55	
BARRANQUILLA	\$ 2,776,304.05	\$ 0.00	\$ 2,566,297.88	\$ 1,567,964.91	\$ 3,356,356.39	\$ 3,111,714.20	\$ 2,494,704.09	\$ 2,741,269.71	\$ 1,802,248.45	\$ 2,743,365.02	\$ 4,258,468.57	\$ 2,633,051.75	\$ 4,696,886.22	\$ 2,453,691.89	\$ 1,932,230.06	\$ 4,523,460.78	\$ 961,038.40	\$ 3,022,811.13	\$ 1,796,953.36	\$ 2,553,523.13	\$ 3,489,060.59	\$ 793,936.37	\$ 215,703.64	\$ 621,385.77	\$ 2,676,237.57	\$ 5,228,364.24	\$ 930,638.21	\$ 3,112,113.71	\$ 2,321,474.66
BOGOTA	\$ 951,553.88	\$ 2,566,297.88	\$ 0.00	\$ 1,095,844.35	\$ 1,639,346.57	\$ 1,390,631.53	\$ 2,478,904.50	\$ 1,013,506.33	\$ 1,814,278.02	\$ 706,105.64	\$ 1,577,499.25	\$ 560,617.70	\$ 2,990,411.57	\$ 943,200.86	\$ 1,153,228.38	\$ 1,841,909.30	\$ 2,236,456.69	\$ 854,569.50	\$ 2,689,087.93	\$ 1,032,738.47	\$ 1,797,585.19	\$ 3,306,273.12	\$ 2,436,330.47	\$ 2,429,533.78	\$ 600,942.27	\$ 3,645,061.34	\$ 2,585,972.61	\$ 427,716.38	\$ 1,177,047.46
BUCARAMANGA	\$ 1,702,627.40	\$ 1,567,964.91	\$ 1,074,771.69	\$ 0.00	\$ 2,452,945.23	\$ 2,167,591.17	\$ 1,666,363.63	\$ 1,710,298.11	\$ 671,638.88	\$ 1,151,256.38	\$ 2,833,138.85	\$ 1,377,120.59	\$ 831,389.61	\$ 1,497,928.56	\$ 1,342,503.32	\$ 3,087,912.37	\$ 2,117,465.44	\$ 2,044,381.74	\$ 3,529,603.05	\$ 1,619,472.12	\$ 2,401,934.70	\$ 2,077,951.89	\$ 1,384,636.82	\$ 1,777,601.09	\$ 925,089.08	\$ 4,158,232.87	\$ 1,356,953.74	\$ 1,680,526.27	\$ 1,653,167.45
BUENAVENTURA	\$ 677,474.30	\$ 3,356,356.39	\$ 1,639,346.57	\$ 2,452,945.23	\$ 0.00	\$ 474,373.52	\$ 3,152,269.68	\$ 687,548.26	\$ 3,143,480.83	\$ 2,443,492.31	\$ 1,692,362.78	\$ 1,003,156.22	\$ 2,102,155.39	\$ 942,496.15	\$ 1,552,162.31	\$ 1,671,831.18	\$ 2,616,565.51	\$ 1,583,145.40	\$ 1,802,395.59	\$ 739,170.78	\$ 865,367.74	\$ 4,222,399.64	\$ 3,408,103.89	\$ 2,810,245.34	\$ 2,298,837.26	\$ 2,720,001.94	\$ 3,502,481.70	\$ 2,165,309.18	\$ 2,897,828.45
CALI	\$ 433,123.94	\$ 3,111,714.20	\$ 1,390,631.53	\$ 2,167,591.17	\$ 474,373.52	\$ 0.00	\$ 3,009,643.84	\$ 525,561.61	\$ 2,889,916.66	\$ 2,230,076.32	\$ 1,158,559.26	\$ 761,196.67	\$ 1,579,678.88	\$ 967,565.43	\$ 1,314,563.05	\$ 1,138,029.76	\$ 2,454,660.51	\$ 985,671.67	\$ 1,279,676.34	\$ 497,702.05	\$ 296,438.72	\$ 4,080,837.42	\$ 1,339,711.20	\$ 2,648,280.86	\$ 2,137,431.47	\$ 2,147,066.13	\$ 3,340,764.61	\$ 1,919,722.59	\$ 2,501,793.90
CARTAGENA	\$ 2,686,462.00	\$ 249,704.09	\$ 3,489,683.05	\$ 1,666,363.63	\$ 3,163,049.23	\$ 3,020,422.38	\$ 0.00	\$ 2,651,529.37	\$ 1,852,509.48	\$ 2,767,998.18	\$ 3,133,203.28	\$ 2,488,792.28	\$ 6,006,022.00	\$ 2,362,516.78	\$ 1,844,575.58	\$ 4,366,468.23	\$ 820,625.07	\$ 2,882,834.37	\$ 2,461,146.64	\$ 2,461,146.64	\$ 1,156,668.63	\$ 488,162.00	\$ 476,907.86	\$ 2,845,707.41	\$ 3,374,412.42	\$ 1,072,832.34	\$ 3,015,607.75	\$ 3,034,788.29	
CARTAGO (VALLE)	\$ 121,129.30	\$ 2,718,322.49	\$ 1,169,587.00	\$ 1,710,878.89	\$ 693,715.57	\$ 452,580.54	\$ 2,558,900.31	\$ 0.00	\$ 2,422,366.03	\$ 1,672,292.47	\$ 1,678,735.60	\$ 439,007.41	\$ 1,917,557.42	\$ 246,405.56	\$ 861,277.91	\$ 1,943,317.15	\$ 1,929,207.34	\$ 970,283.19	\$ 1,711,069.24	\$ 45,579.28	\$ 889,970.74	\$ 3,355,612.18	\$ 2,692,745.70	\$ 2,105,366.21	\$ 1,736,874.52	\$ 2,480,130.75	\$ 2,814,400.38	\$ 1,604,704.95	\$ 2,211,075.51
CUCUTA	\$ 2,455,953.20	\$ 1,758,770.95	\$ 1,793,205.36	\$ 671,638.88	\$ 3,143,480.83	\$ 2,889,916.66	\$ 1,852,509.48	\$ 2,297,598.87	\$ 0.00	\$ 1,811,966.09	\$ 3,389,688.02	\$ 2,105,840.22	\$ 4,533,889.82	\$ 2,236,741.68	\$ 1,872,713.32	\$ 3,653,808.61	\$ 2,337,255.80	\$ 2,767,975.70	\$ 4,232,717.32	\$ 2,339,348.98	\$ 3,063,060.57	\$ 2,322,049.69	\$ 1,627,441.16	\$ 1,997,231.49	\$ 1,481,582.09	\$ 4,880,078.19	\$ 1,610,476.06	\$ 2,396,842.13	\$ 2,358,607.84
DUITAMA	\$ 1,734,328.77	\$ 2,743,365.02	\$ 463,771.39	\$ 1,151,256.38	\$ 2,422,419.67	\$ 2,209,003.66	\$ 2,767,988.18	\$ 1,651,219.80	\$ 1,811,966.09	\$ 0.00	\$ 2,215,272.80	\$ 1,181,774.74	\$ 3,632,094.45	\$ 1,504,958.26	\$ 1,649,488.76	\$ 2,479,642.33	\$ 2,833,388.42	\$ 1,681,099.93	\$ 3,225,910.67	\$ 1,643,292.66	\$ 2,399,359.58	\$ 2,963,930.58	\$ 2,538,291.74	\$ 3,026,248.25	\$ 64,495.38	\$ 4,112,514.85	\$ 2,242,918.60	\$ 1,052,186.77	\$ 506,461.36
FLORENCIA	\$ 1,531,319.28	\$ 4,258,468.57	\$ 1,577,499.25	\$ 2,854,211.51	\$ 1,692,362.78	\$ 1,158,569.61	\$ 2,122,424.74	\$ 1,678,735.60	\$ 3,410,760.69	\$ 2,236,345.46	\$ 0.00	\$ 1,237,988.74	\$ 1,793,814.99	\$ 1,884,215.42	\$ 2,289,878.02	\$ 764,104.45	\$ 3,446,461.78	\$ 651,559.23	\$ 1,543,618.19	\$ 1,667,693.86	\$ 797,309.56	\$ 4,516,282.80	\$ 3,999,956.39	\$ 3,629,372.37	\$ 2,300,712.64	\$ 2,367,031.46	\$ 3,796,343.86	\$ 2,022,277.70	\$ 2,807,077.23
IBAGUE	\$ 311,226.50	\$ 2,645,525.80	\$ 560,617.70	\$ 1,377,120.59	\$ 1,003,156.22	\$ 761,196.67	\$ 2,490,492.78	\$ 370,862.85	\$ 2,105,840.22	\$ 1,202,847.41	\$ 1,237,988.74	\$ 0.00	\$ 2,355,548.99	\$ 613,574.55	\$ 1,276,971.08	\$ 1,502,303.10	\$ 2,208,844.23	\$ 467,123.52	\$ 2,055,442.41	\$ 446,518.02	\$ 1,101,942.22	\$ 3,278,660.66	\$ 2,369,028.55	\$ 2,494,705.80	\$ 1,296,020.20	\$ 2,976,481.80	\$ 2,558,360.15	\$ 1,086,920.04	\$ 1,816,050.76
IPIALES-NARIÑO	\$ 2,056,389.11	\$ 4,696,886.22	\$ 2,990,411.57	\$ 3,831,389.61	\$ 2,102,155.39	\$ 1,579,778.89	\$ 4,595,243.45	\$ 1,917,557.42	\$ 4,533,889.82	\$ 3,653,167.11	\$ 1,793,814.99	\$ 2,355,548.99	\$ 0.00	\$ 2,356,798.32	\$ 2,905,693.48	\$ 664,165.24	\$ 3,847,140.17	\$ 1,815,062.01	\$ 280,607.50	\$ 2,083,450.31	\$ 1,003,334.17	\$ 5,452,348.04	\$ 4,910,761.33	\$ 4,029,532.00	\$ 3,529,031.85	\$ 637,747.11	\$ 4,731,170.07	\$ 3,518,582.46	\$ 4,252,477.92
MANIZALES	\$ 285,981.38	\$ 2,453,691.89	\$ 943,200.86	\$ 1,497,928.56	\$ 942,496.15	\$ 697,565.43	\$ 2,851,738.24	\$ 234,507.12	\$ 2,236,741.68	\$ 1,526,030.92	\$ 1,884,215.42	\$ 1,613,574.55	\$ 2,356,798.32	\$ 0.00	\$ 654,430.59	\$ 2,148,533.89	\$ 1,736,661.58	\$ 1,219,614.82	\$ 2,062,582.53	\$ 157,771.30	\$ 1,161,006.59	\$ 3,301,137.41	\$ 2,437,225.08	\$ 1,919,161.26	\$ 2,149,767.06	\$ 2,936,920.52	\$ 2,579,952.97	\$ 1,183,829.85	\$ 2,095,491.62
MEDÉLLIN	\$ 1,012,894.98	\$ 1,936,233.06	\$ 1,153,228.38	\$ 3,134,563.05	\$ 3,134,420.05	\$ 1,314,563.05	\$ 2,851,738.24	\$ 2,350,501.61	\$ 1,872,713.32	\$ 1,676,971.08	\$ 2,289,878.02	\$ 1,276,971.08	\$ 2,906,693.48	\$ 654,430.59	\$ 0.00	\$ 2,688,842.66	\$ 1,113,543.48	\$ 1,405,293.04	\$ 2,806,428.32	\$ 736,692.90	\$ 1,753,012.13	\$ 2,966,339.68	\$ 2,632,555.08	\$ 1,339,545.62	\$ 1,868,237.63	\$ 2,669,277.50	\$ 2,251,327.16	\$ 1,663,798.94	\$ 2,312,014.64
MOCOA	\$ 1,740,402.51	\$ 4,316,609.56	\$ 1,760,404.11	\$ 2,930,421.02	\$ 1,633,319.07	\$ 1,118,168.17	\$ 4,190,706.99	\$ 1,878,040.33	\$ 3,468,998.92	\$ 2,372,341.29	\$ 755,263.62	\$ 1,445,867.11	\$ 643,577.00	\$ 2,083,257.07	\$ 2,563,375.53	\$ 0.00	\$ 3,632,446.72	\$ 898,407.13	\$ 404,300.88	\$ 1,844,436.16	\$ 774,945.68	\$ 4,579,307.10	\$ 4,090,429.68	\$ 3,815,407.16	\$ 2,422,674.10	\$ 1,215,545.28	\$ 3,895,960.22	\$ 2,083,257.07	\$ 2,796,121.76
MONTERIA	\$ 2,033,300.25	\$ 954,135.29	\$ 2,236,456.69	\$ 2,110,562.33	\$ 2,616,565.51	\$ 2,454,660.61	\$ 820,625.07	\$ 1,929,207.34	\$ 2,330,352.69	\$ 2,854,461.08	\$ 3,446,461.78	\$ 2,208,844.23	\$ 3,847,140.17	\$ 1,736,661.58	\$ 1,113,543.48	\$ 3,801,875.79	\$ 0.00	\$ 2,864,178.86	\$ 3,520,548.72	\$ 1,766,873.45	\$ 2,780,114.95	\$ 2,007,357.68	\$ 1,482,175.06	\$ 316,753.29	\$ 3,012,134.81	\$ 4,342,575.24	\$ 1,271,904.77	\$ 2,780,631.35	\$ 3,358,437.34
NEIVA	\$ 846,356.29	\$ 3,005,371.68	\$ 872,008.93	\$ 2,065,464.50	\$ 1,583,145.40	\$ 985,871.67	\$ 2,874,235.75	\$ 2,004,786.61	\$ 2,789,048.36	\$ 1,702,172.59	\$ 651,559.23	\$ 467,123.52	\$ 1,815,062.01	\$ 1,219,614.82	\$ 1,105,293.04	\$ 915,846.58	\$ 2,864,178.86	\$ 0.00	\$ 1,530,308.79	\$ 972,863.02	\$ 743,936.87	\$ 3,846,760.58	\$ 2,805,474.52	\$ 3,057,586.98	\$ 1,626,800.52	\$ 1,601,682.91	\$ 3,112,382.93	\$ 1,381,700.32	\$ 1,970,670.19
PASTO	\$ 1,722,661.82	\$ 4,396,953.63	\$ 2,689,087.93	\$ 3,529,603.05	\$ 2,082,395.59	\$ 1,279,676.34	\$ 2,494,632.19	\$ 1,667,214.31	\$ 4,232,717.32	\$ 2,154,983.34	\$ 1,543,618.19	\$ 2,055,442.41	\$ 2,607,500.50	\$ 2,062,582.53	\$ 2,606,428.32	\$ 404,300.88	\$ 3,020,548.72	\$ 1,530,308.79	\$ 0.00	\$ 1,783,536.76	\$ 704,505.84	\$ 5,191,708.77	\$ 4,610,544.69	\$ 3,702,669.11	\$ 2,327,471.88	\$ 904,643.63	\$ 4,445,362.25	\$ 2,317,468.26	\$ 2,949,672.38
PEREIRA	\$ 115,973.17	\$ 2,553,523.13	\$ 1,032,738.47	\$ 1,619,472.12	\$ 739,170.78	\$ 497,702.05	\$ 2,450,368.09	\$ 57,033.34	\$ 2,339,348.98	\$ 1,664,365.33	\$ 1,667,693.86	\$ 446,518.02	\$ 2,083,450.31	\$ 157,771.30	\$ 736,692.90	\$ 1,926,668.00	\$ 1,569,655.01	\$ 972,863.02	\$ 1,783,536.76	\$ 0.00	\$ 960,656.79	\$ 3,441,287.04	\$ 2,615,883.80	\$ 1,952,005.05	\$ 1,645,257.48	\$ 2,651,006.06	\$ 2,720,904.16	\$ 1,551,627.01	\$ 2,065,600.25
POPAYAN	\$ 863,617.05	\$ 3,489,060.59	\$ 1,797,585.19	\$ 2,401,934.70	\$ 865,367.72	\$ 296,434.84	\$ 3,436,992.63	\$ 889,970.74	\$ 3,063,060.57	\$ 2,420,431.74	\$ 797,309.56	\$ 1,101,942.22	\$ 1,003,334.17	\$ 1,161,006.59	\$ 1,733,012.13	\$ 774,945.68	\$ 2,780,114.95	\$ 743,936.87	\$ 704,505.84	\$ 960,656.79	\$ 0.00	\$ 4,450,207.72	\$ 3,904,236.77	\$ 2,952,100.13	\$ 2,486,104.73	\$ 1,746,650.37	\$ 3,714,930.15	\$ 2,378,070.82	\$ 3,015,670.41
RIOHACHA	\$ 3,556,880.32	\$ 793,936.37	\$ 3,306,273.12	\$ 2,077,951.89	\$ 4,222,399.64	\$ 4,060,837.42	\$ 1,156,668.63	\$ 3,535,612.18	\$ 2,331,132.74	\$ 2,963,930.58	\$ 5,416,282.80	\$ 3,278,660.66	\$ 5,452,348.04	\$ 3,301,137.41	\$ 2,996,339.68	\$ 4,794,878.04	\$ 2,014,260.80	\$ 3,855,843.63	\$ 5,191,708.77	\$ 3,441,287.04	\$ 4,450,207.72	\$ 0.00	\$ 485,710.63	\$ 1,690,569.26	\$ 3,139,988.55	\$ 6,015,936.05	\$ 599,920.60	\$ 3,772,801.57	\$ 3,569,575.33
SANTA MARTA	\$ 2,732,015.01	\$ 215,703.64	\$ 2,436,330.47	\$ 1,364,636.82	\$ 2,398,103.89	\$ 3,139,711.20	\$ 488,162.00	\$ 3,018,416.36	\$ 1,627,441.16	\$ 2,538,291.74	\$ 3,999,956.39	\$ 2,350,741.35	\$ 4,910,761.33	\$ 2,437,223.69	\$ 2,282,555.08	\$ 4,269,426.22	\$ 1,489,078.19	\$ 2,814,554.66	\$ 4,610,544.69	\$ 2,615,883.80	\$ 3,846,226.33	\$ 485,710.63	\$ 0.00	\$ 1,165,383.46	\$ 2,614,628.00	\$ 5,672,952.40	\$ 744,782.94	\$ 2,981,923.94	\$ 3,084,291.67
SINCELEJO	\$ 2,215,756.12	\$ 621,385.77	\$ 2,418,755.24	\$ 1,777,601.09	\$ 3,709,468.80	\$ 3,673,502.32	\$ 446,907.86	\$ 2,008,587.67	\$ 1,997,231.49	\$ 3,036,542.37	\$ 3,629,372.37	\$ 3,291,142.78	\$ 4,029,532.20	\$ 1,919,161.26	\$ 2,339,545.62	\$ 3													

B. Costo del viaje de una hora hábil adicional de espera, carga y descarga: \$ 17.070

A diferencia de los costos de traslado, estos costos se producen cuando el vehículo está apagado mientras se espera o ejecuta el cargue y descargue. Se habla de horas hábiles porque los costos se calculan asumiendo que el vehículo sólo opera 12 horas diarias. Por ejemplo, si se trabaja entre las 6am y las 6pm, NO se deben contar como horas de espera, carga y descarga el tiempo que está fuera de este horario.

C. ¿Cómo se calcula el costo del viaje?

$$\text{Costo del viaje} = \text{Costos de traslado de la carga} + (\text{Horas de espera, carga y descarga}) \times \$17.070$$

D. ¿Cómo calcular el costo total por tonelada?

$$\text{Costo por tonelada} = \frac{\text{Costo de traslado de la carga} + (\text{Horas de espera, carga y descarga}) \times \$17.070}{9}$$

Nota: En otros orígenes destinos los costos de referencia se deben ajustar de manera proporcional a los kilómetros recorridos. En otras configuraciones se deben ajustar los costos de acuerdo a la configuración del vehículo.