

Densified Biomass Fuel Report



For

Pellet Fuels Institute Annual Conference

June 23rd, 2022

By

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Key Takeaways

- 2021 was a below average year for the domestic pellet market. Premium/Standard pellet production and domestic sales, both quantity and revenue, were down from 2019 historic highs.
- 2021 was an above average year for the export pellet market.
- Total feedstock purchases for 2021 were 17,627,173 tons.
- Total Premium/Standard pellet production for 2021 were 1,795,195 tons.
- Total Utility Pellet production for 2021 6,923,560 tons
- Domestic Sales for 2021 were 1,720,654 tons with a total revenue of \$334,641,830.
- Export Sales for 2021 were 7,955,534 tons with a total revenue of \$1,353,712,566.

Agenda

- History of the survey
- What the survey collects
- How the data is published
- Summarize 2021-2022 data
- Post Presentation Q&A

About EIA

The U.S. Energy Information Administration (EIA) is the statistical and analytical agency within the US Department of Energy. EIA collects, analyzes, and disseminates independent and impartial energy information to promote sound policymaking, efficient markets, and public understanding of energy and its interaction with the economy and the environment. EIA is the nations premier source of energy information and, by law, its data, analyses, and forecasts are independent of approval by any other officer or employee of the US Government.

EIA is an independent statistical agency under the U.S. Department of Energy, is policy neutral, and uses collected data for statistical purposes. Sensitive or confidential data are protected from disclosure at an identifiable level. For more information about EIA, visit our web site: <http://www.eia.gov/>

History and Purpose

- EIA received a letter from two Senators (Maine and New Hampshire) in 2014 asking to increase coverage of energy from woody biomass.
- EIA received support from other stakeholders.
- Densified Biomass Fuel Report was officially approved August 28th, 2015.

Respondents and Requirements

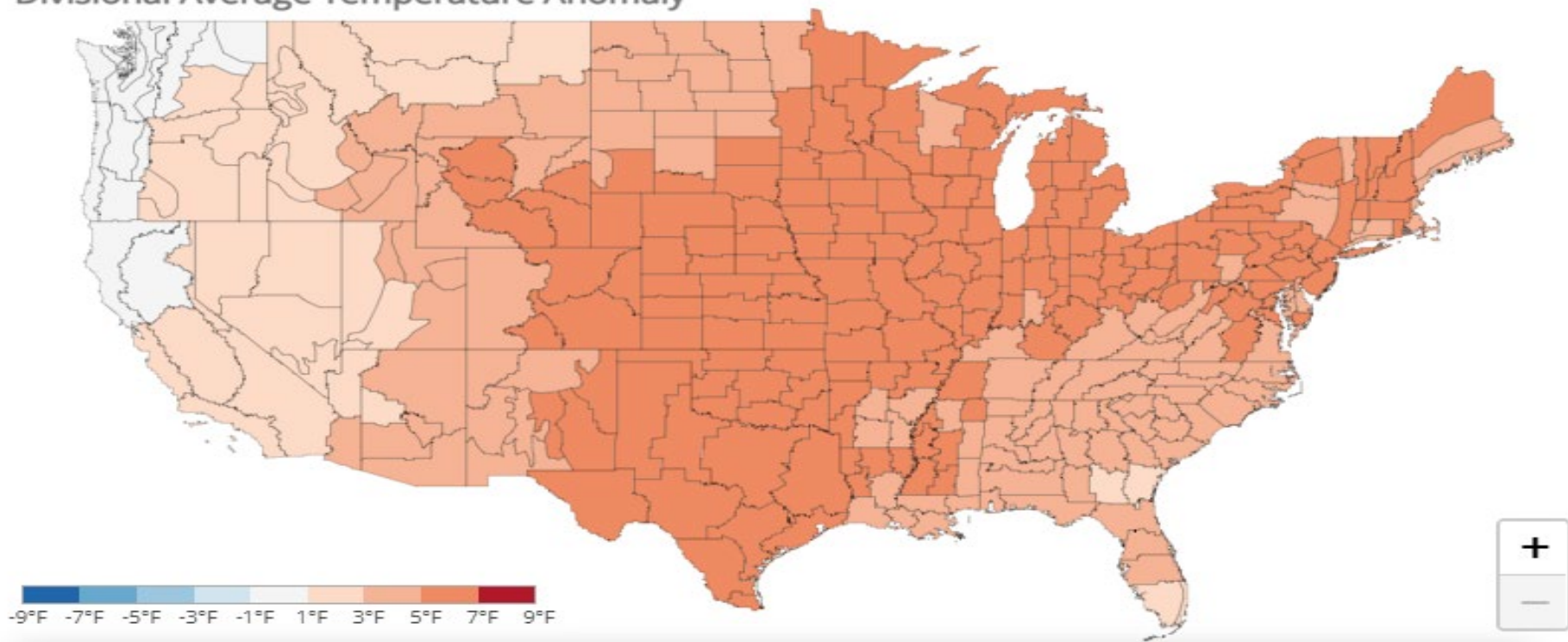
- All manufacturers of densified biomass fuel products must report on EIA-63C. Both currently operating and those planning to begin operating within one year.
- Those with capacity of 10,000 tons/year or more report monthly.
- Plants producing only animal bedding, absorbents, and/or grilling pellets are not required to report. All others should report **ONLY FUEL** intended for heating or electric power.
- Currently, around 80 manufacturers report each month.

Data Collected

- Plant History: Capacity, plant status and FTE
- Feedstocks: type, source, quantities and cost
- Production: type of product, quantities and characteristics
- Inventory: type of product, total held
- Sales: domestic and export, type of product, quantities and revenues

Divisional Average Temperature Anomaly

October - December 2021



Contiguous U.S. (Hover over a climate division)

Temp: 47.1°F

Rank: 2nd Warmest

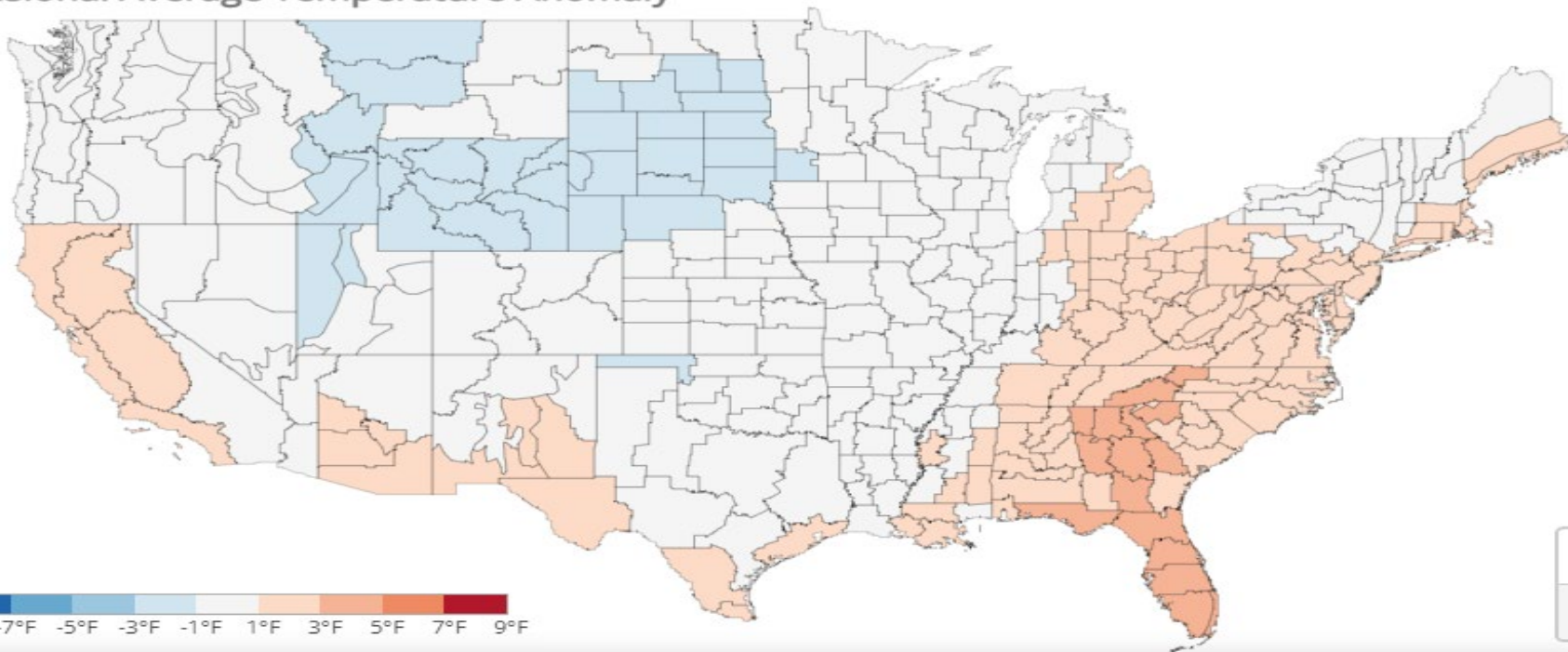
Anomaly: 4.3°F

Mean: 42.8°F



Divisional Average Temperature Anomaly

October - December 2019



Contiguous U.S. (Hover over a climate division)

Temp: 43.2°F

Rank: 63rd Warmest

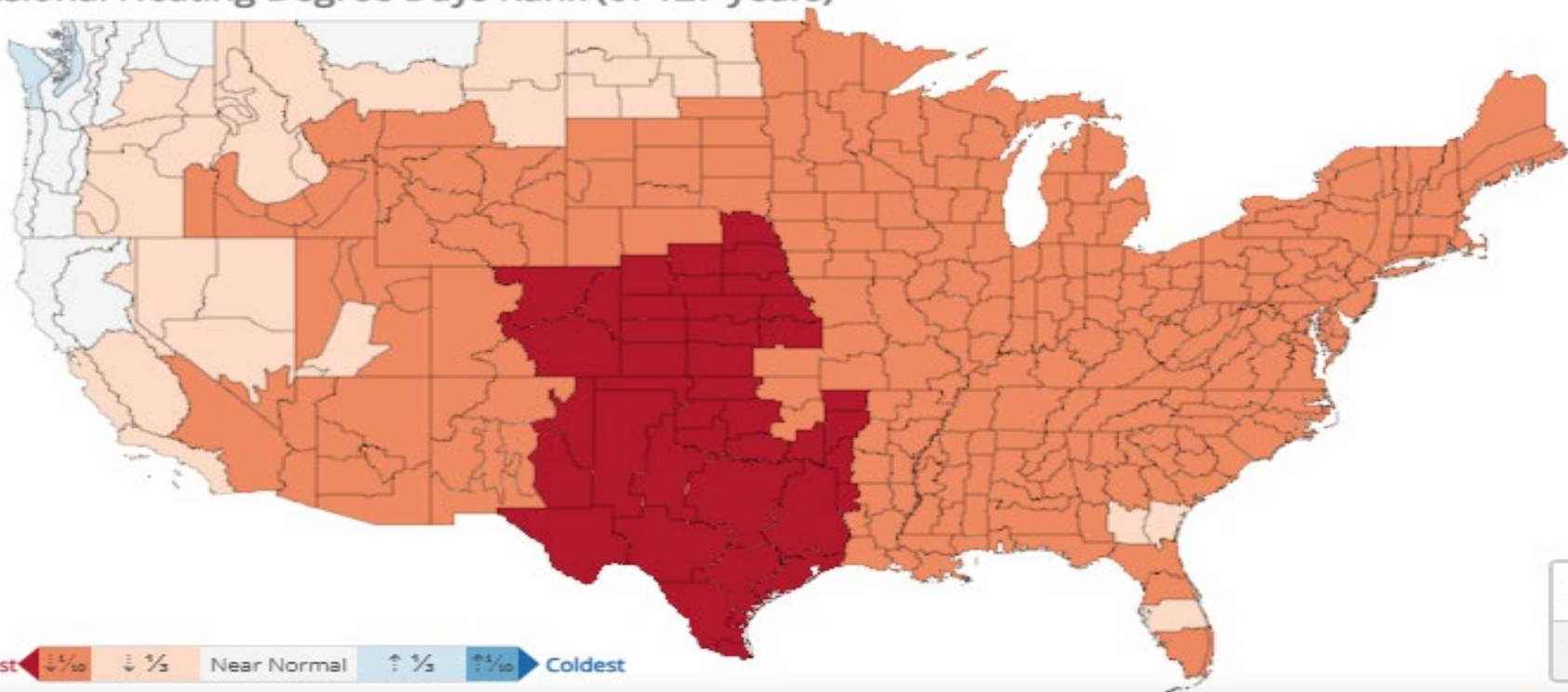
Anomaly: 0.4°F

Mean: 42.8°F



Divisional Heating Degree Days Rank (of 127 years)

October - December 2021



Warmest Near Normal Coldest

Contiguous U.S. (Hover over a climate division)

HDD: 1,324°Df

Rank: 2nd Warmest

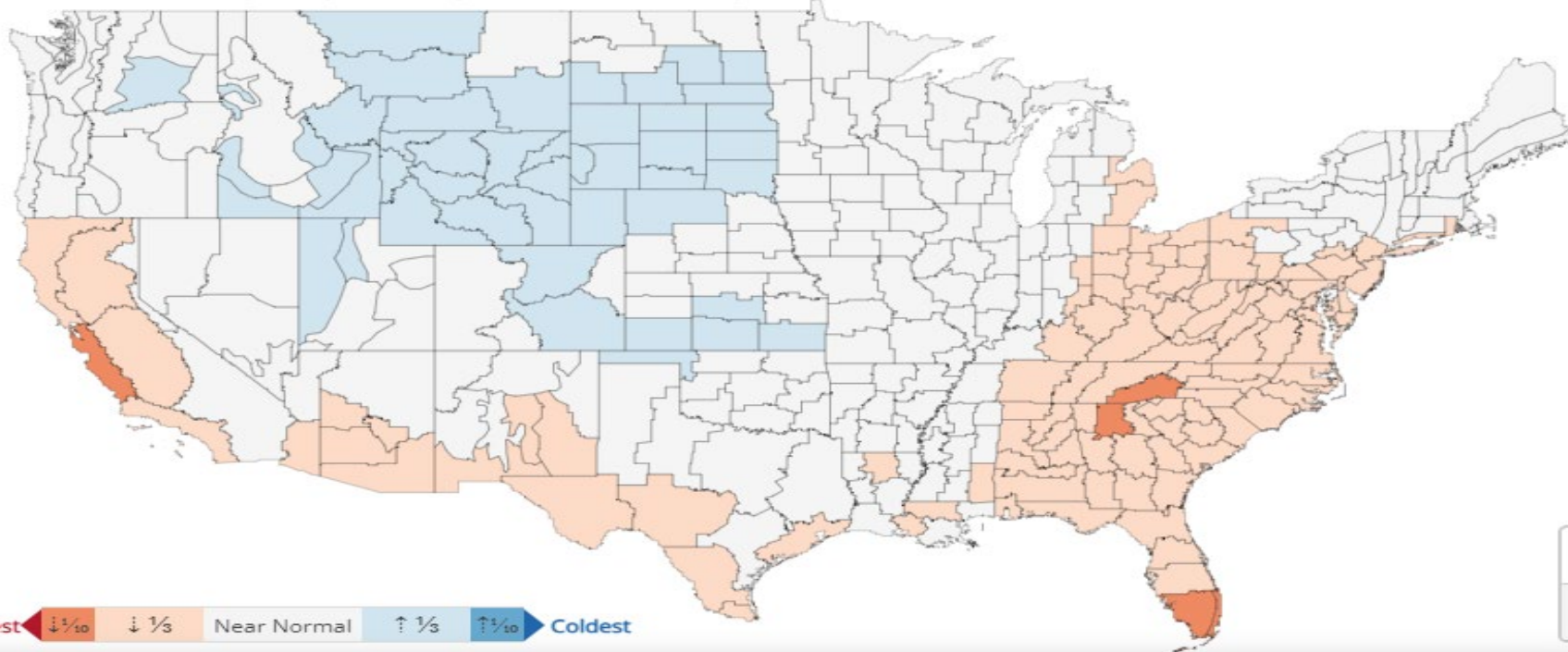
Anomaly: -359°Df

Mean: 1,683°Df



Divisional Heating Degree Days Rank (of 127 years)

October - December 2019



Contiguous U.S. (Hover over a climate division)

HDD: 1,583°Df

Rank: 34th Warmest

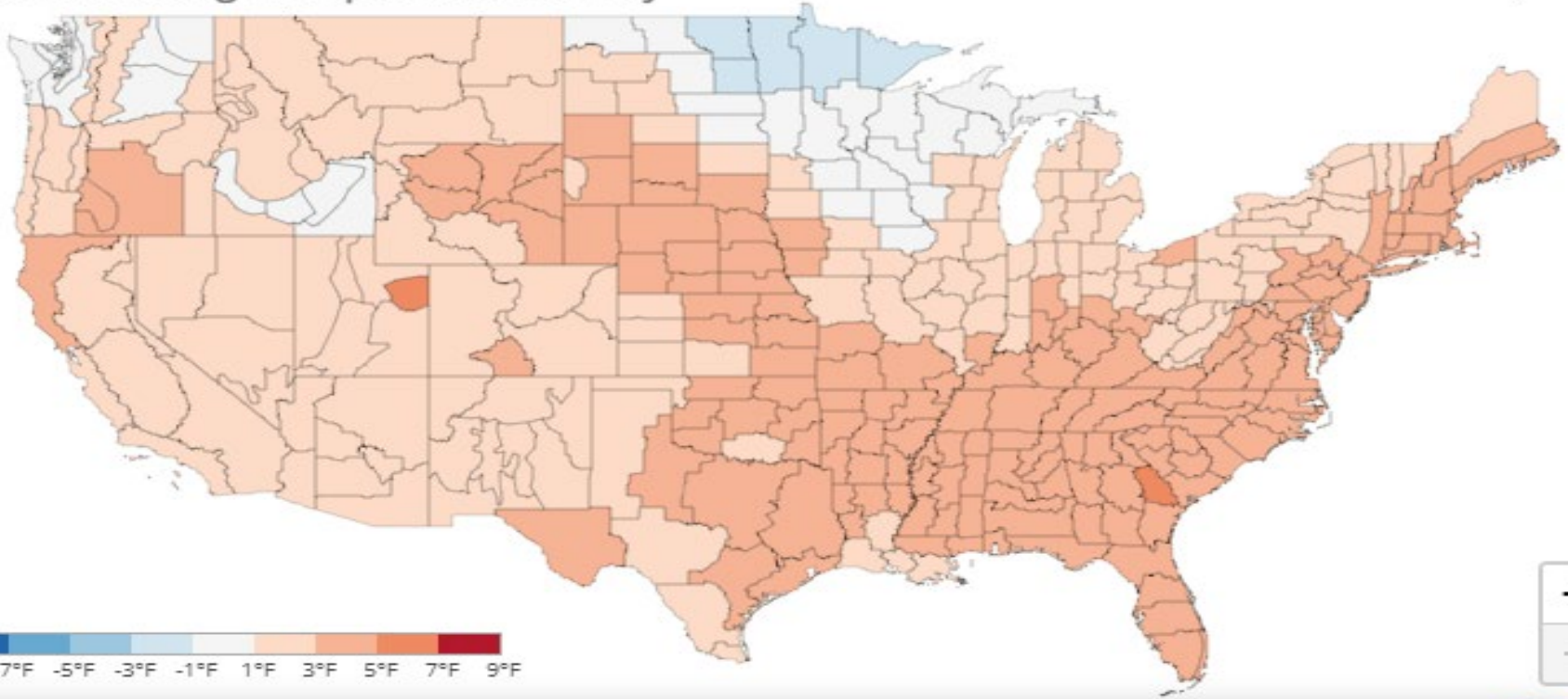
Anomaly: -100°Df

Mean: 1,683°Df



Divisional Average Temperature Anomaly

December 2021 - February 2022



Contiguous U.S. (Hover over a climate division)

Temp: 34.8°F

Rank: 19th Warmest

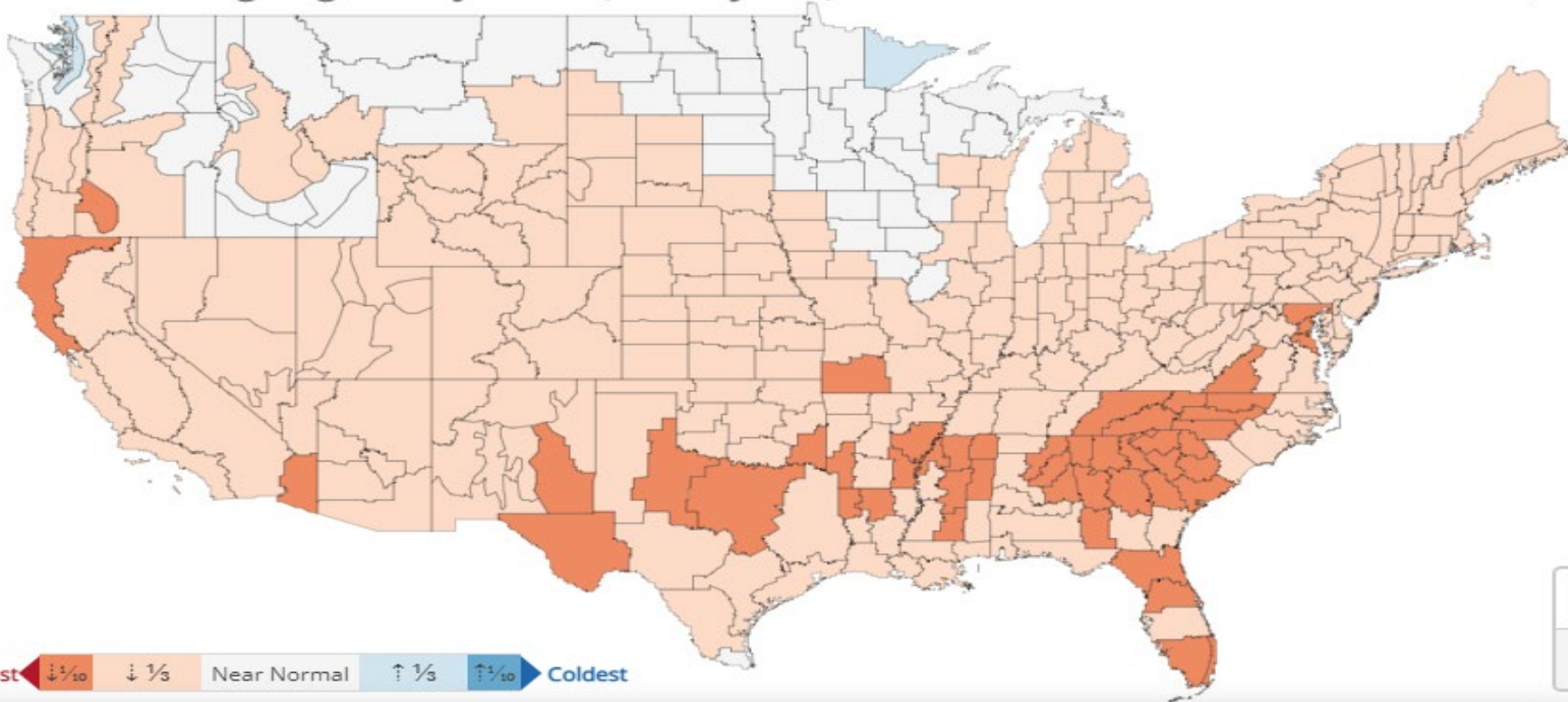
Anomaly: 2.5°F

Mean: 32.2°F



Divisional Heating Degree Days Rank (of 128 years)

December 2021 - February 2022



Contiguous U.S. (Hover over a climate division)

HDD: 2,277°Df

Rank: 13th Warmest

Anomaly: -255°Df

Mean: 2,532°Df



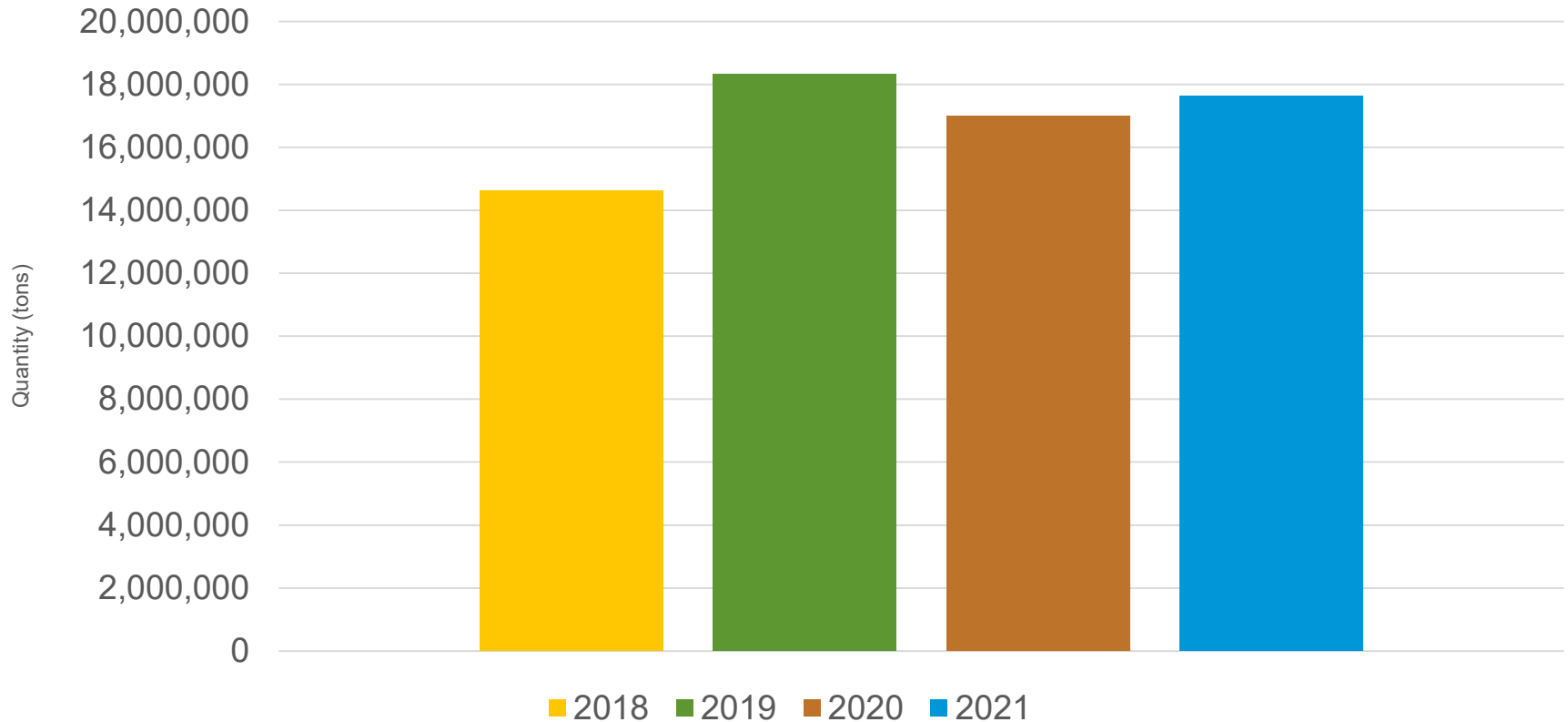
Table 3 Feedstocks

Table 3. Feedstocks and average cost per ton for the manufacture of densified biomass products, 2022

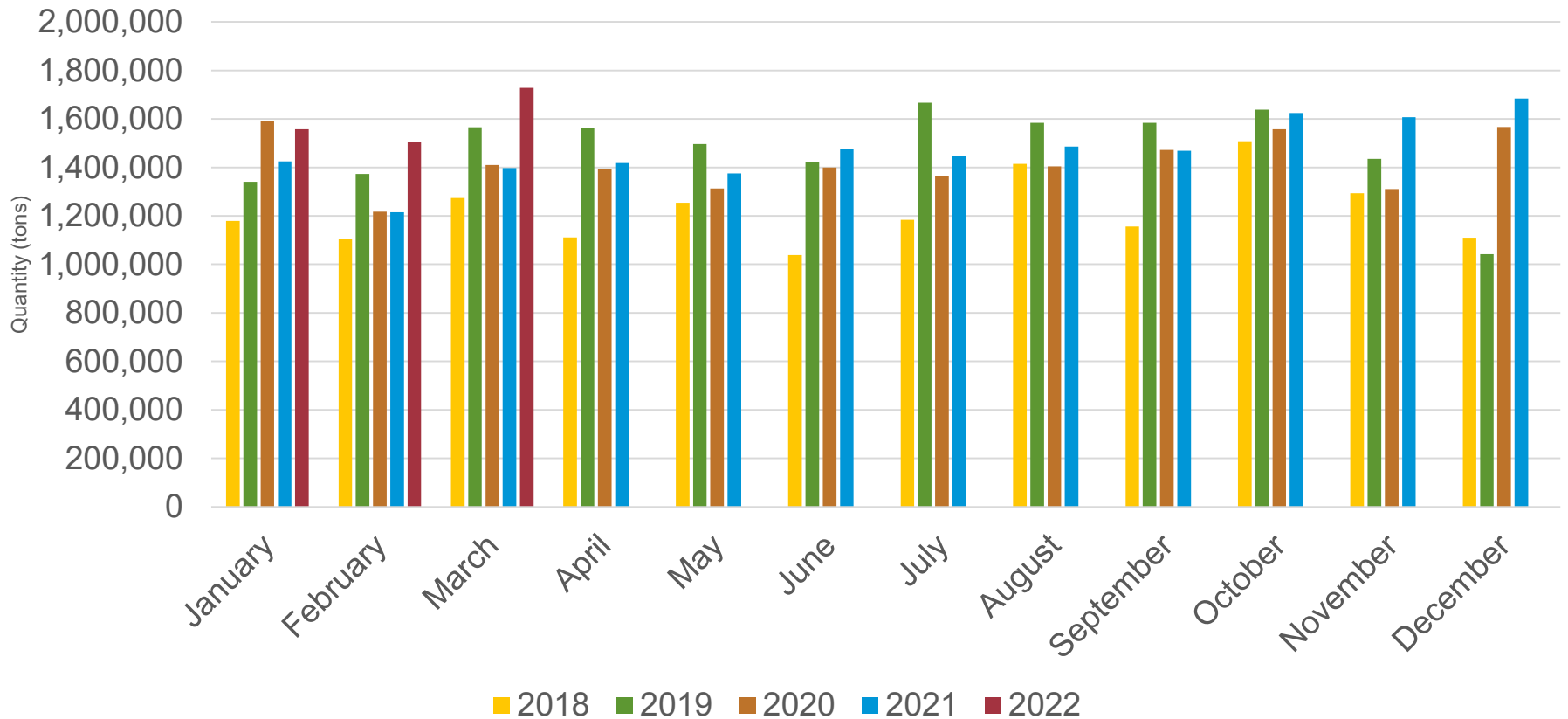
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Month	Roundwood/pulpwood		Sawmill residuals		Wood product manufacturing residuals		Other residuals	
	quantity (tons)	cost (USD per ton)	quantity (tons)	cost (USD per ton)	quantity (tons)	cost (USD per ton)	quantity (tons)	cost (USD per ton)
January	362,696	\$31.88	505,265	\$37.39	93,022	\$35.30	596,920	\$33.05
February	304,301	\$33.31	497,280	\$38.67	94,216	\$31.89	608,203	\$31.43
March	309,401	\$31.65	645,098	\$34.94	120,172	\$36.32	653,562	\$28.47

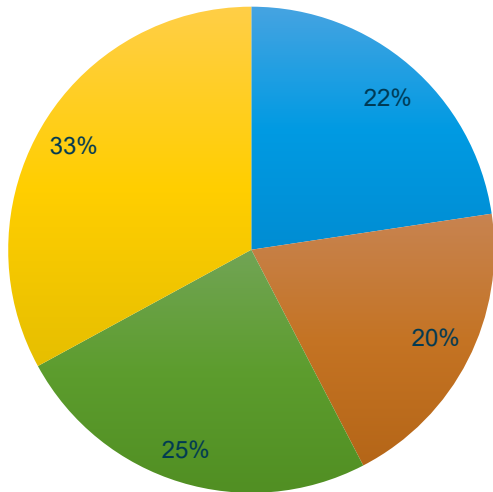
Total Feedstock Purchases by Year



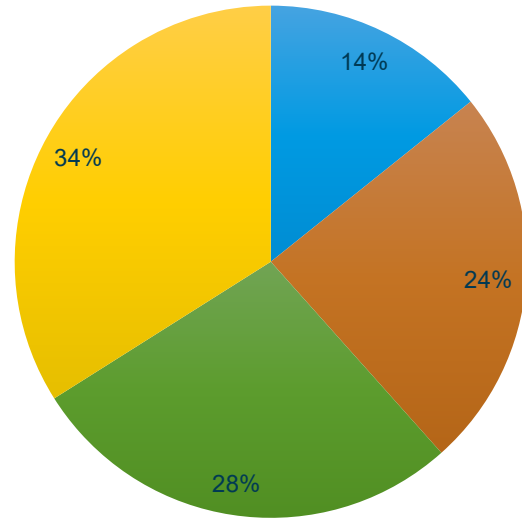
Total Feedstock Purchases by Month



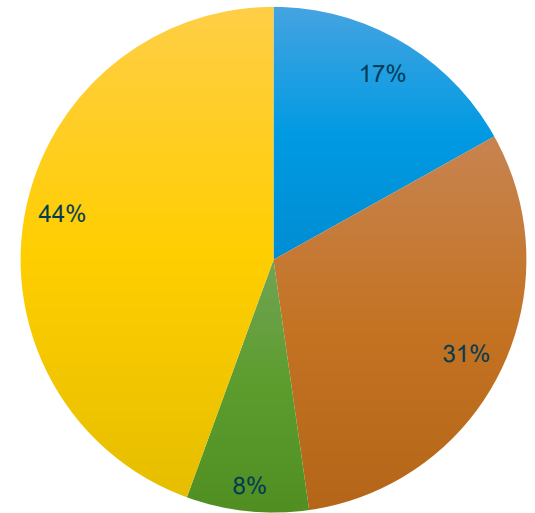
2019



2020



2021



■ Roundwood/Pulpwood ■ Sawmill Residuals ■ Wood Product Manufacturing Residuals ■ Other Residuals

Feedstock Purchase By Type

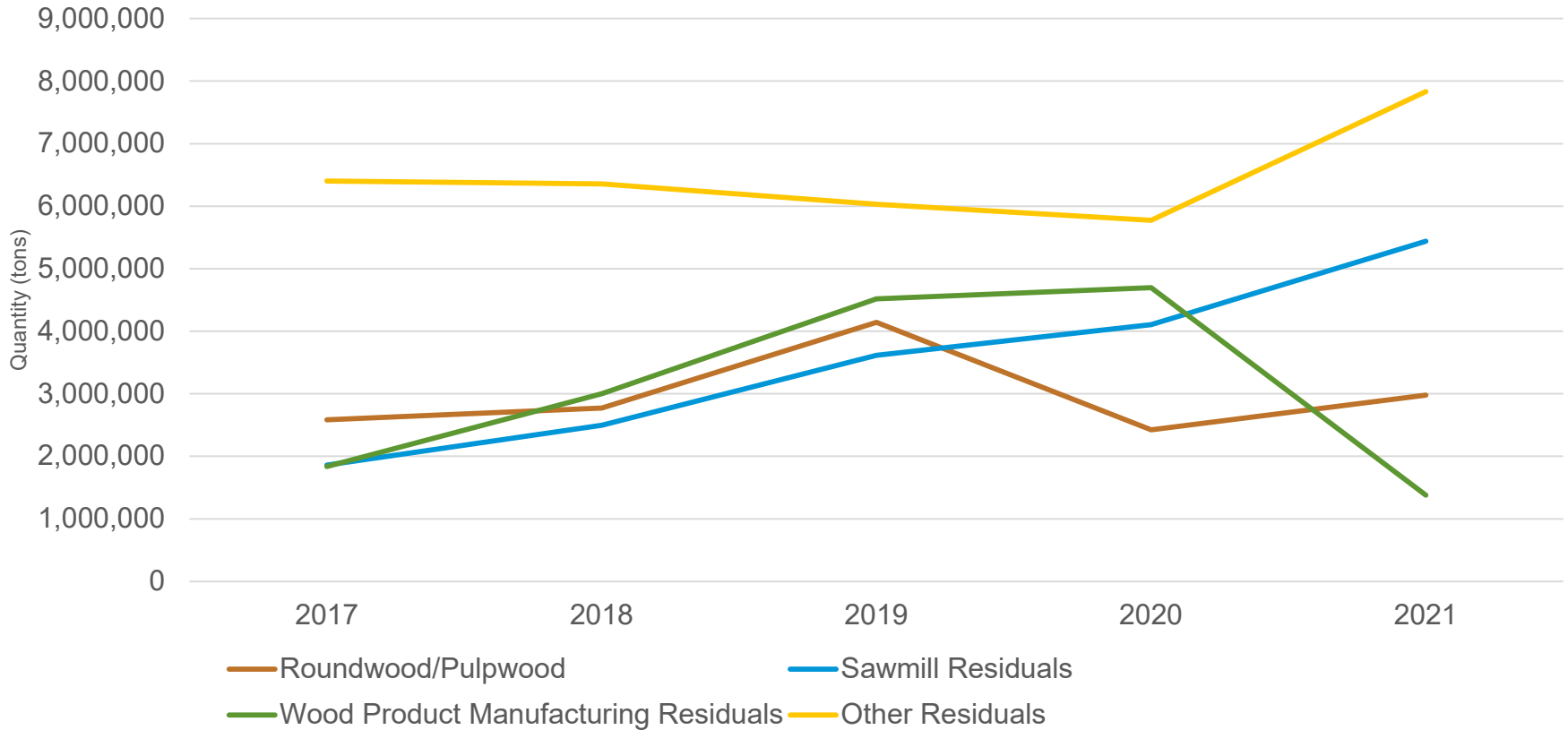


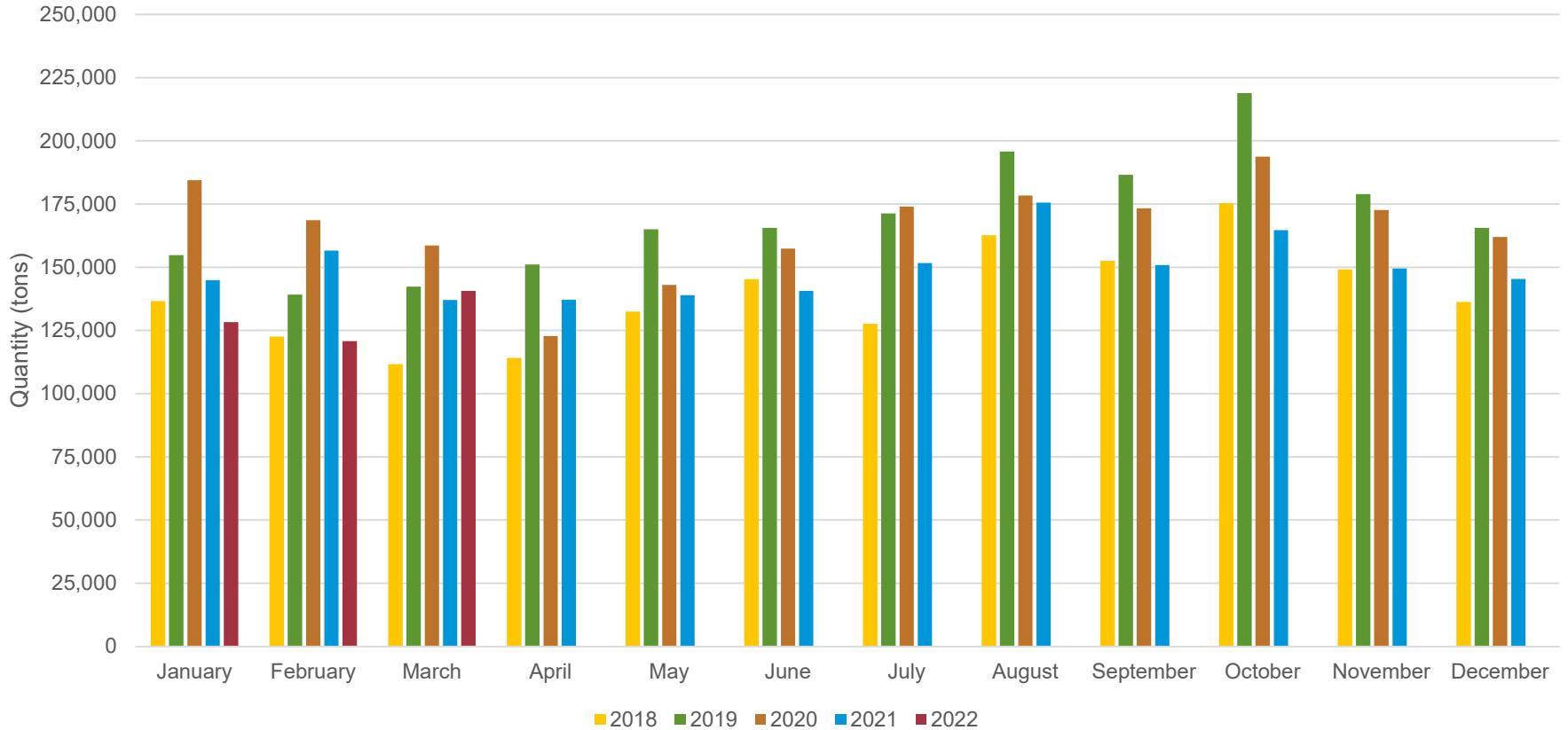
Table 4 Production

Table 4. Production of densified biomass fuel, 2022 (tons)

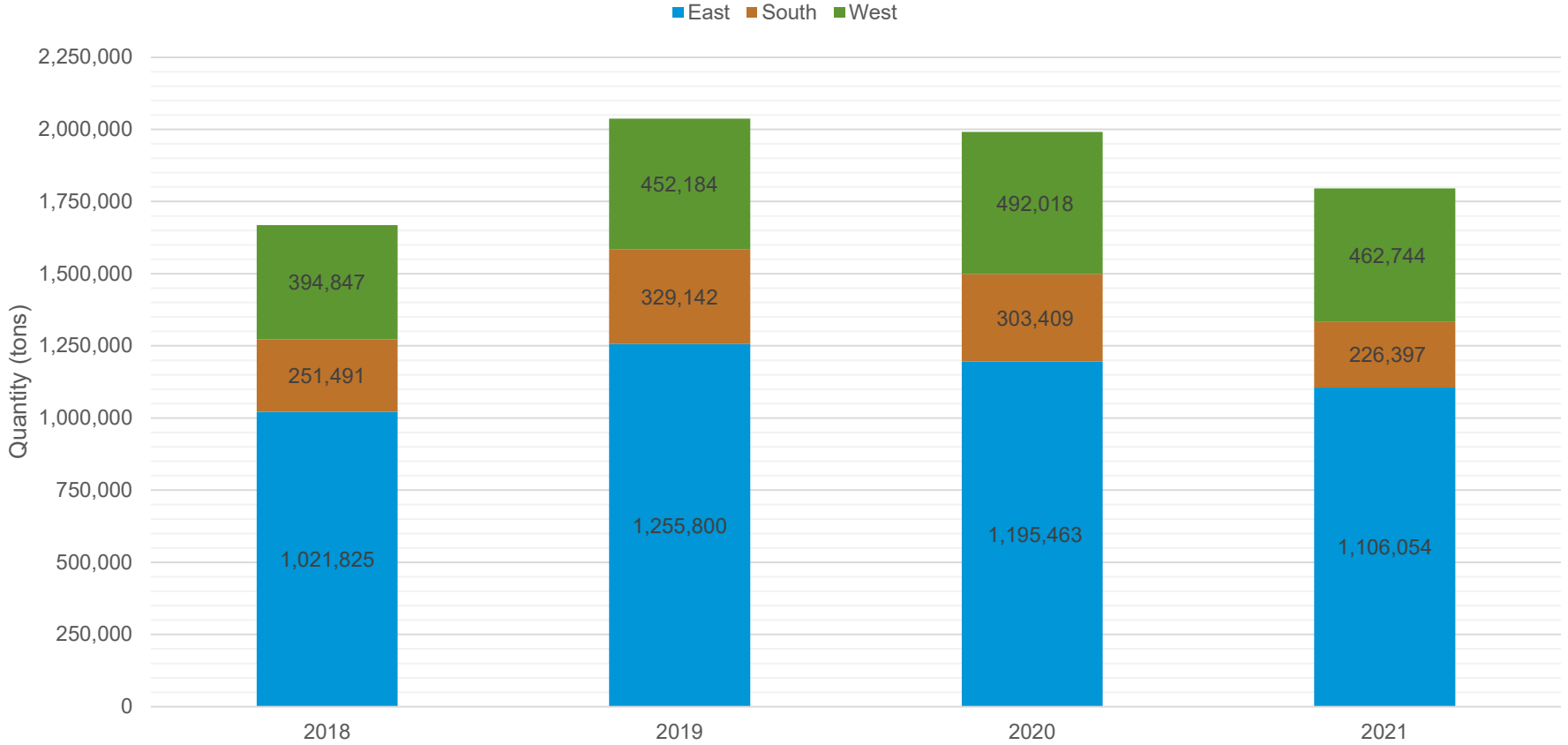
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Region	Month	Wood pellets, premium/standard	Wood pellets, utility
East			
	January	84,569	N/A
	February	76,749	N/A
	March	91,260	N/A
South			
	January	12,479	663,349
	February	11,981	608,879
	March	12,944	779,786
West			
	January	31,271	N/A
	February	31,986	N/A
	March	36,478	N/A
U.S. total			
	January	128,319	663,349
	February	120,716	608,879
	March	140,682	779,786

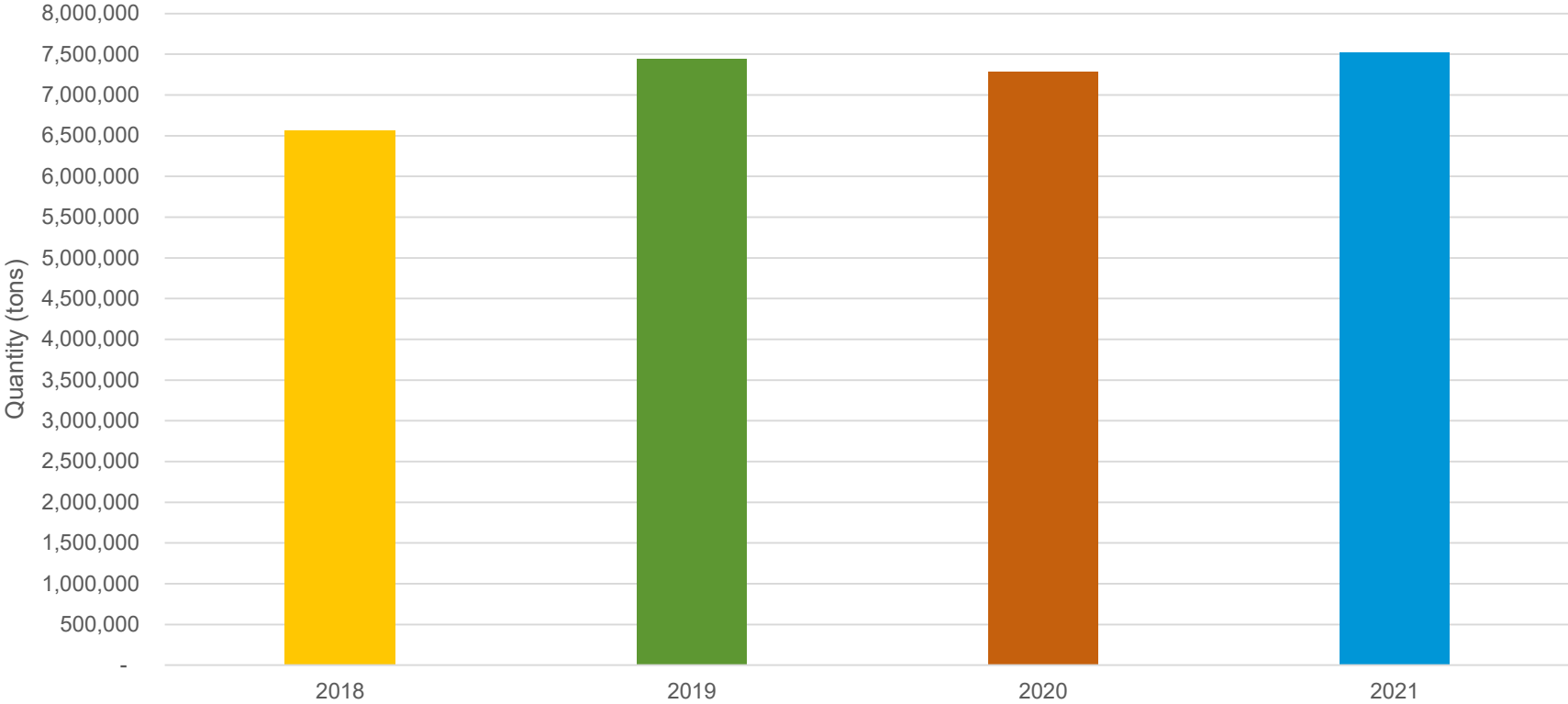
Premium/Standard Wood Pellet Production by Month



Premium/Standard Production by Region



Utility Pellet Yearly Production



Utility Pellet Production by Month

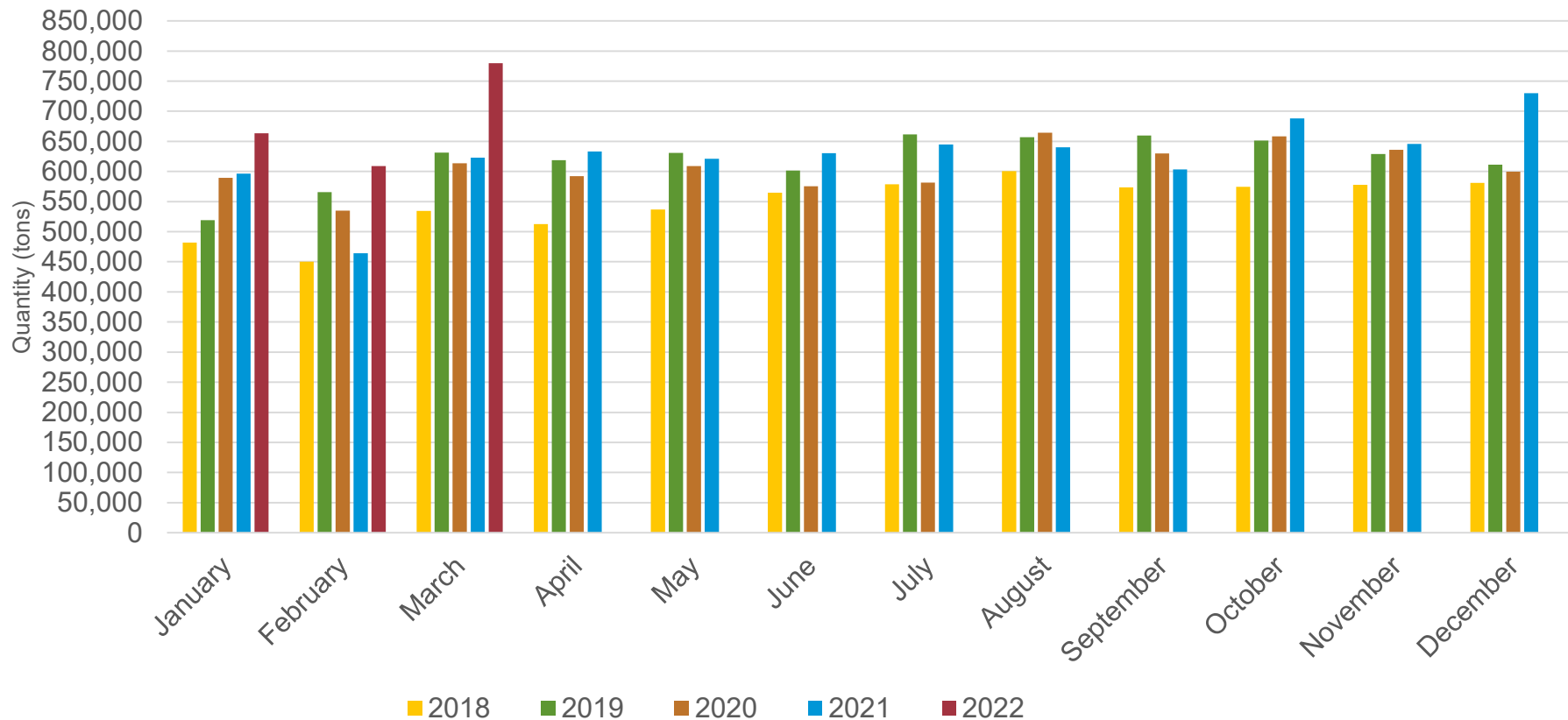


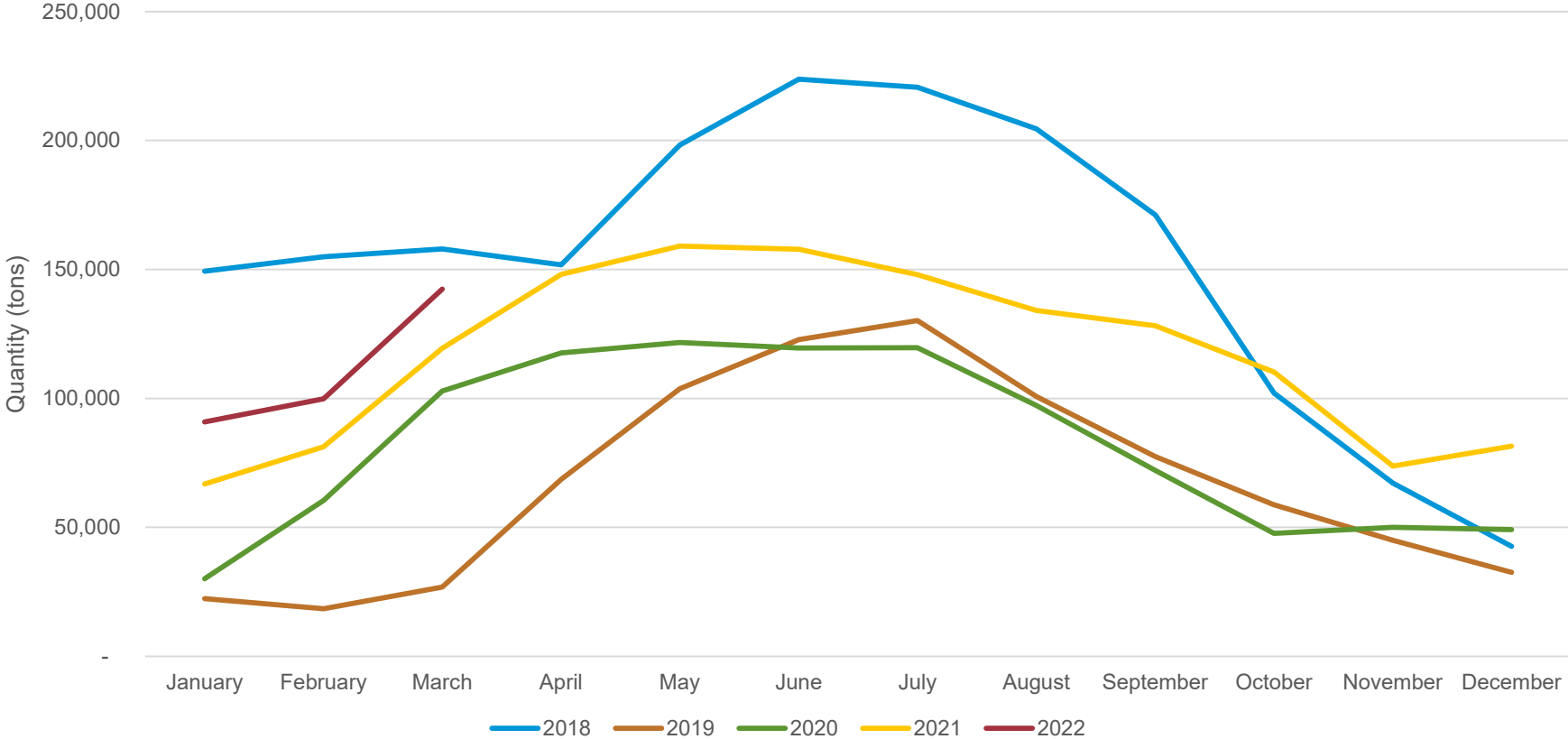
Table 6 Inventory

Table 6. Inventories of densified biomass fuel, 2022 (tons)

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Region	Month	Wood pellets, premium/standard	Wood pellets, utility
East			
	January	90,923	N/A
	February	99,833	N/A
	March	142,424	N/A
South			
	January	49,430	367,249
	February	49,425	299,000
	March	57,351	347,147
West			
	January	29,273	N/A
	February	34,493	N/A
	March	49,274	N/A
U.S. total			
	January	169,626	367,249
	February	183,751	299,000
	March	249,049	347,147

East Region Premium/Standard Pellet Inventory



Total Premium/Standard Inventory

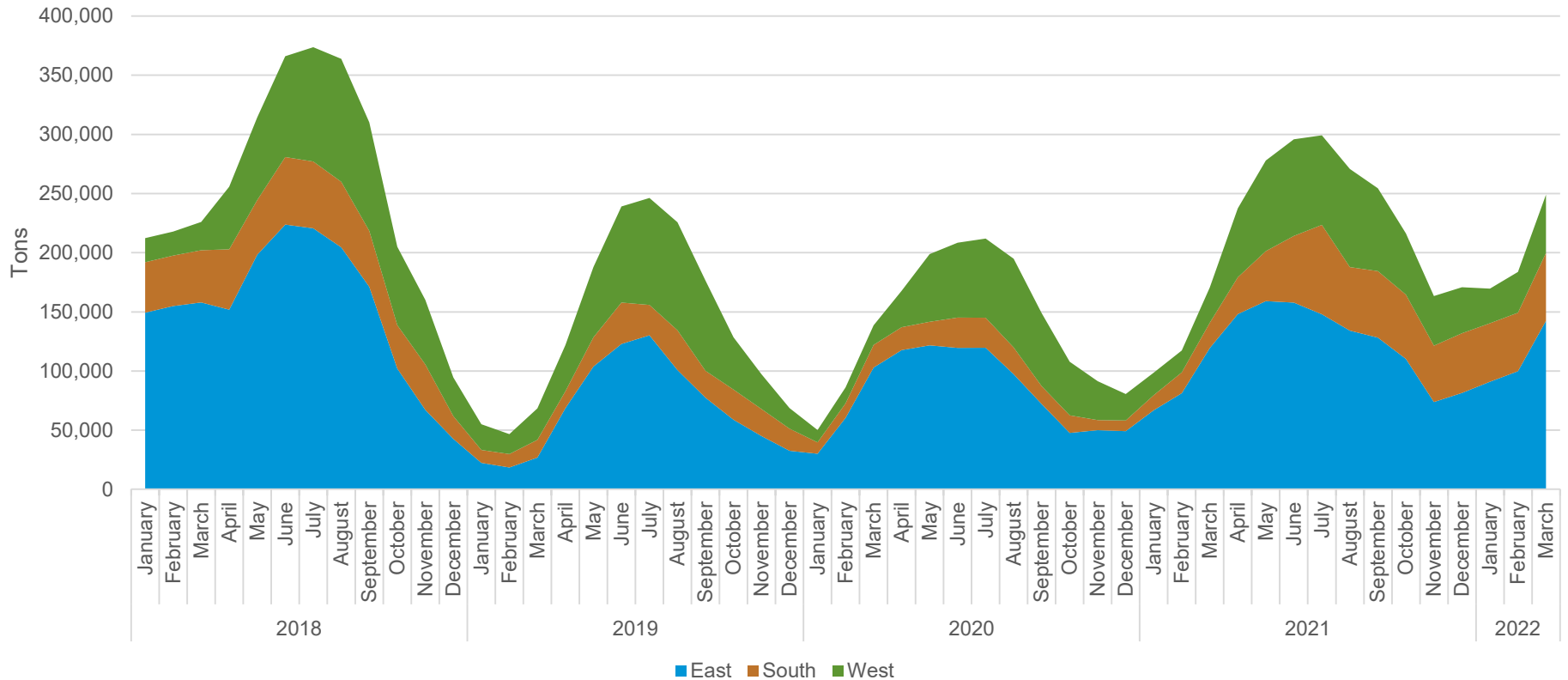


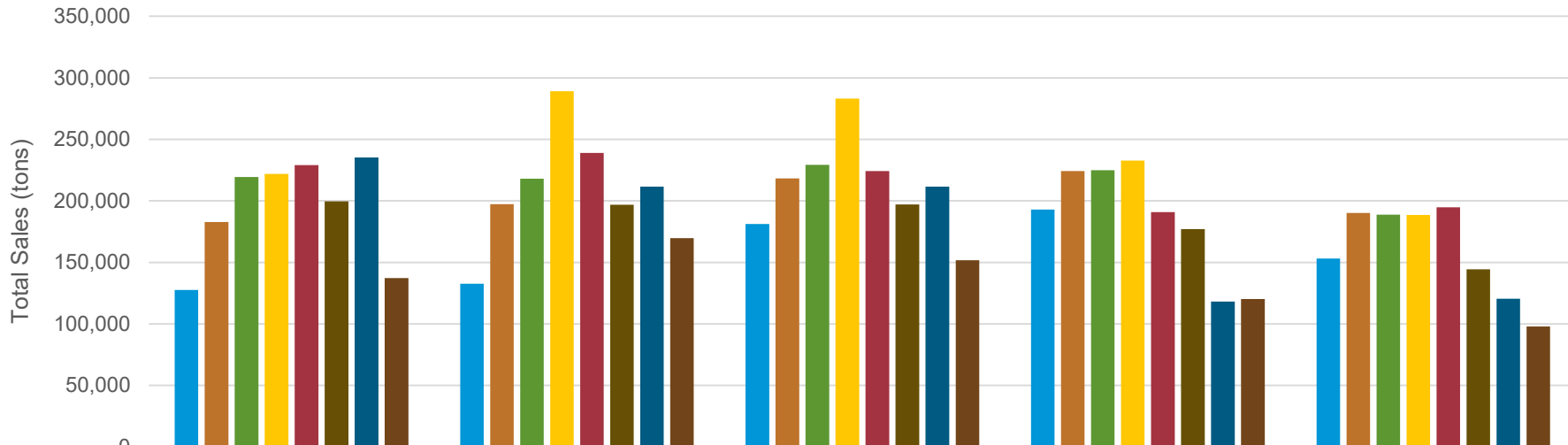
Table 7 Domestic Sales

Table 7. Domestic sales and average price of densified biomass fuel, 2022

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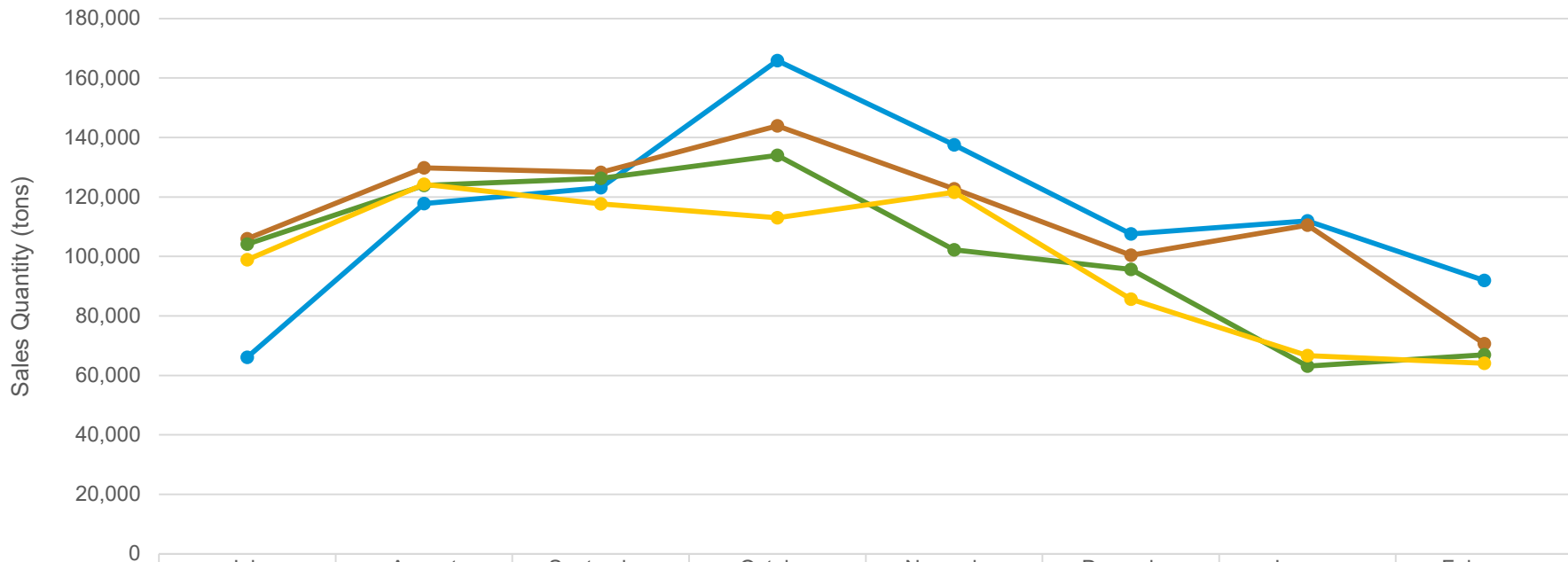
Region	Month	Quantity (tons)	Average price (USD per ton)
East			
	January	66,652	\$202.67
	February	64,041	\$202.21
	March	46,277	\$200.89
South			
	January	17,880	\$166.78
	February	7,706	\$189.74
	March	4,412	\$180.04
West			
	January	36,052	\$198.33
	February	26,256	\$202.08
	March	19,846	\$191.54
U.S. total			
	January	120,584	\$196.05
	February	98,003	\$201.20
	March	70,535	\$196.95

Heating Season Domestic Sales



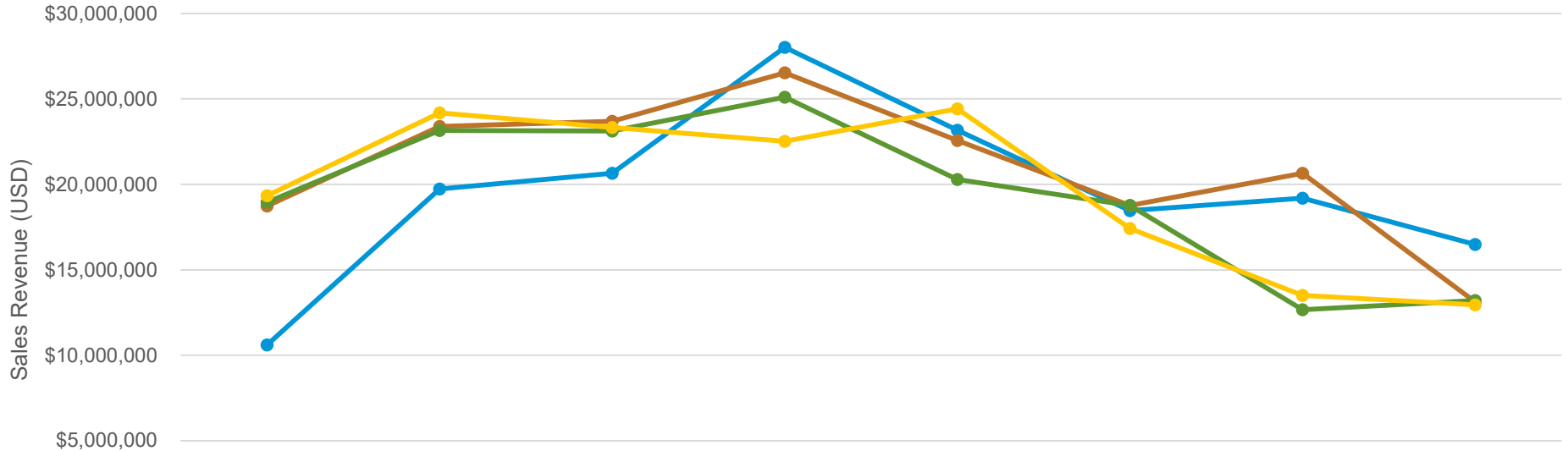
	2017-18	2018-19	2019-20	2020-2021	2021-22
July	127,649	132,686	181,291	192,924	153,186
August	182,769	197,250	218,293	224,170	190,122
September	219,369	218,008	229,327	224,964	188,737
October	221,853	289,032	283,061	232,703	188,506
November	228,945	238,913	224,095	190,742	194,806
December	199,570	196,931	197,156	177,098	144,315
January	235,220	211,452	211,529	118,217	120,584
February	137,202	169,714	151,716	120,215	98,003

East Region Domestic Sales Quantity



	July	August	September	October	November	December	January	February
2018-19	66,080	117,729	123,112	165,862	137,509	107,594	111,923	91,915
2019-20	105,961	129,775	128,292	143,941	122,749	100,367	110,500	70,623
2020-21	104,134	123,835	126,234	133,953	102,242	95,633	63,128	66,879
2021-22	98,907	124,281	117,679	113,023	121,630	85,629	66,652	64,041

East Region Domestic Sales Revenue



	July	August	September	October	November	December	January	February
2018-19	\$10,601,875.20	\$19,723,139.37	\$20,654,500.24	\$28,009,115.94	\$23,171,641.59	\$18,464,206.34	\$19,197,032.96	\$16,485,874.40
2019-20	\$18,727,547.14	\$23,397,134.75	\$23,690,400.72	\$26,521,129.25	\$22,567,403.65	\$18,760,599.64	\$20,643,610.00	\$13,128,109.47
2020-21	\$18,950,305.32	\$23,153,429.95	\$23,126,068.80	\$25,093,415.49	\$20,288,902.48	\$18,762,238.27	\$12,655,901.44	\$13,203,252.18
2021-22	\$19,328,405.94	\$24,186,325.41	\$23,329,861.75	\$22,518,702.52	\$24,423,304.00	\$17,414,369.73	\$13,508,360.84	\$12,949,730.61

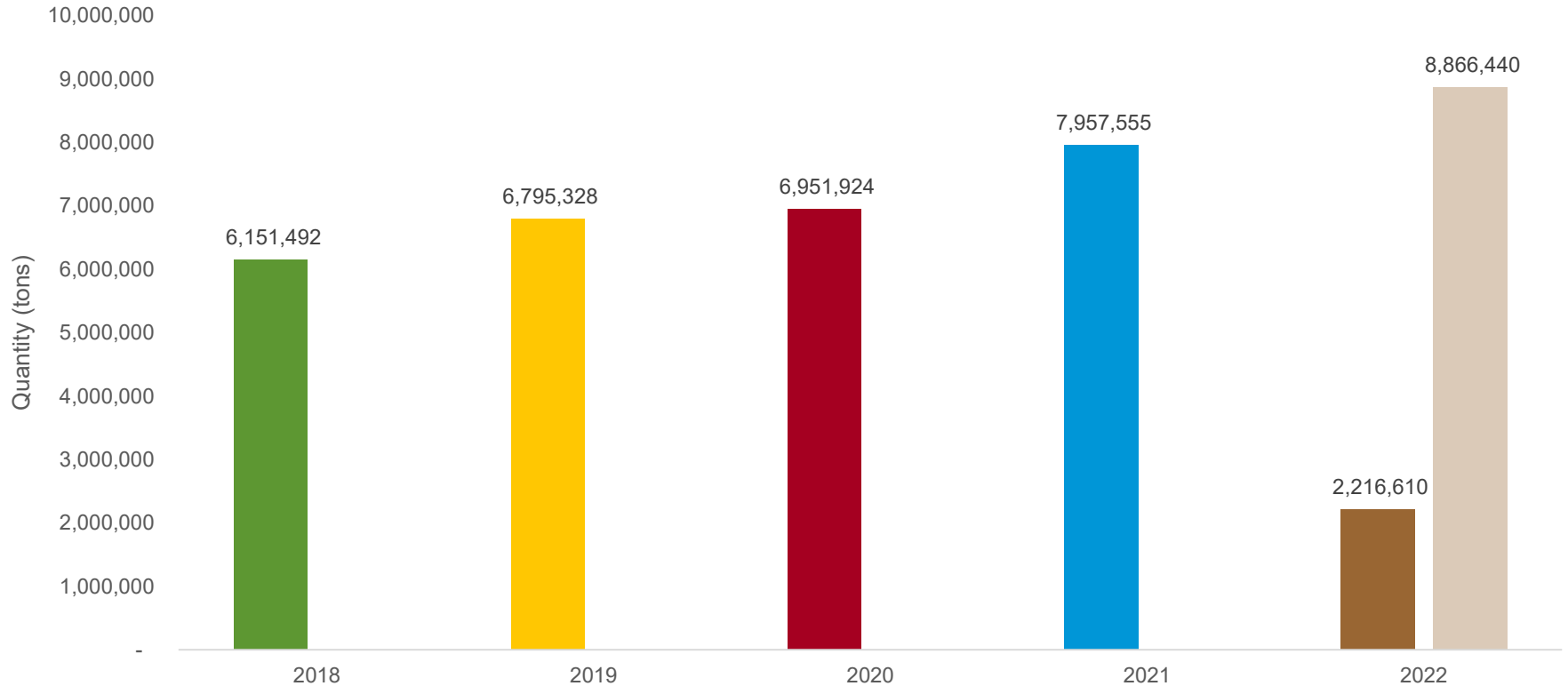
Table 8 Export Sales

Table 8. Export sales and average price of densified biomass fuel, 2022

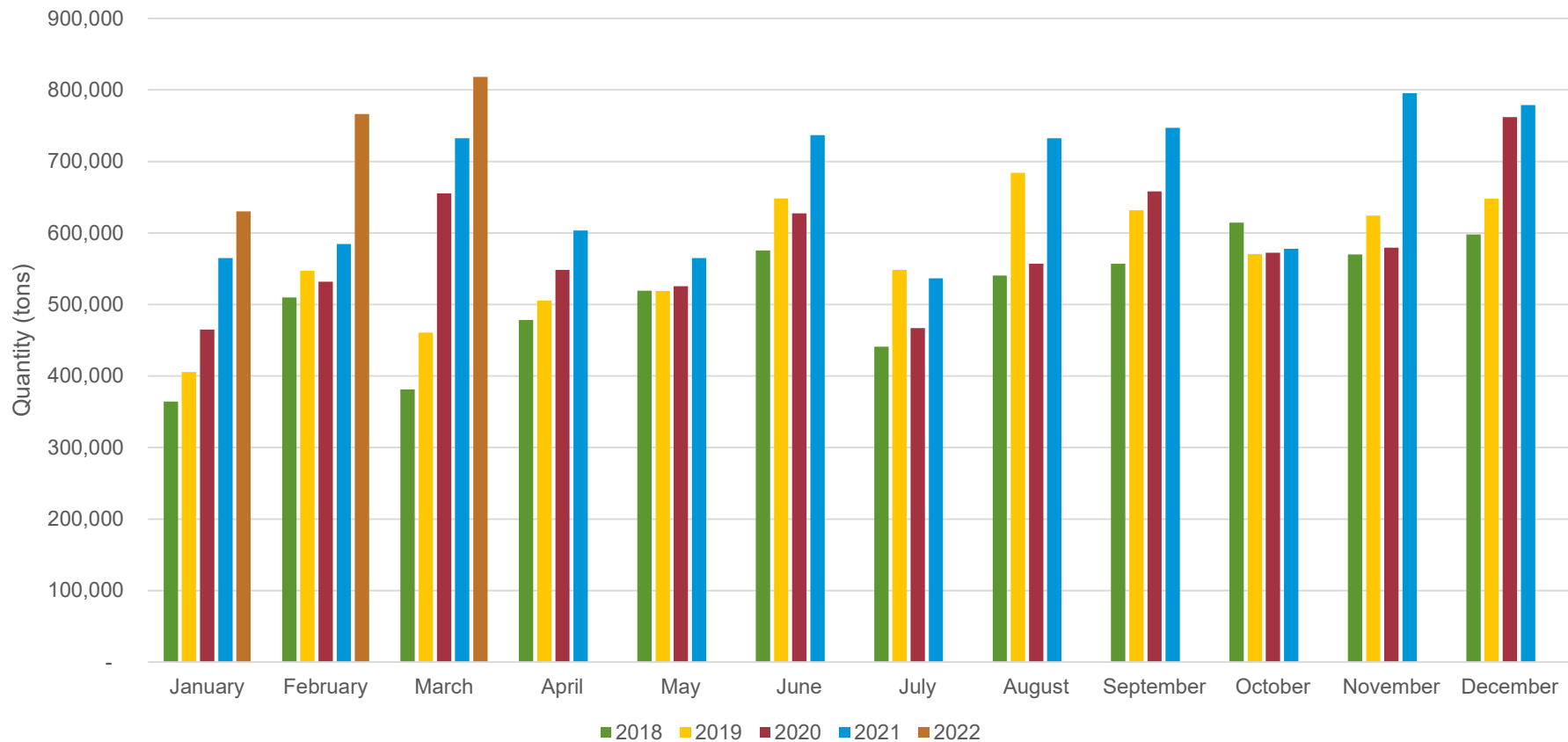
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Month	Quantity (tons)	Average price (USD per ton)
January	630,064	\$168.38
February	766,386	\$169.94
March	818,138	\$183.84

Total Export Sales



Total Export Sales by Month



Contact Information

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