

# Overview of US Beef Production, Export, Import and Domestic Consumption Trends: 2003-2019

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As the US beef-cattle industry continues to adapt to the situation presented by COVID-19 (novel coronavirus), developments arise that require sound information to guide decision-making. Recently the topic of exports and imports in the industry has received heightened attention. Accordingly, this fact sheet was composed to provide data-driven context on related historical trends.

## **2019 vs 2003 Statistics: Bookending Pre-COVID19 Long-Term Trends**

It is useful to first summarize key industry statistics for 2019 and contrast to 2003. This provides specific values documenting long-term trends discussed further in subsequent sections of this report.<sup>1</sup> The year 2003 is firmly in memory as the year that “BSE stole Christmas.”<sup>2</sup>

In 2003 total US beef production was 26.34 billion pounds, 2.52 billion pounds of beef were exported, 3.01 billion pounds of beef were imported, and total domestic beef disappearance was 27.00 billion pounds corresponding to 65.03 pounds per person. Hence in 2003, 9.56% of total US beef production was exported and 11.13% of total US beef disappearance was sourced from imports.

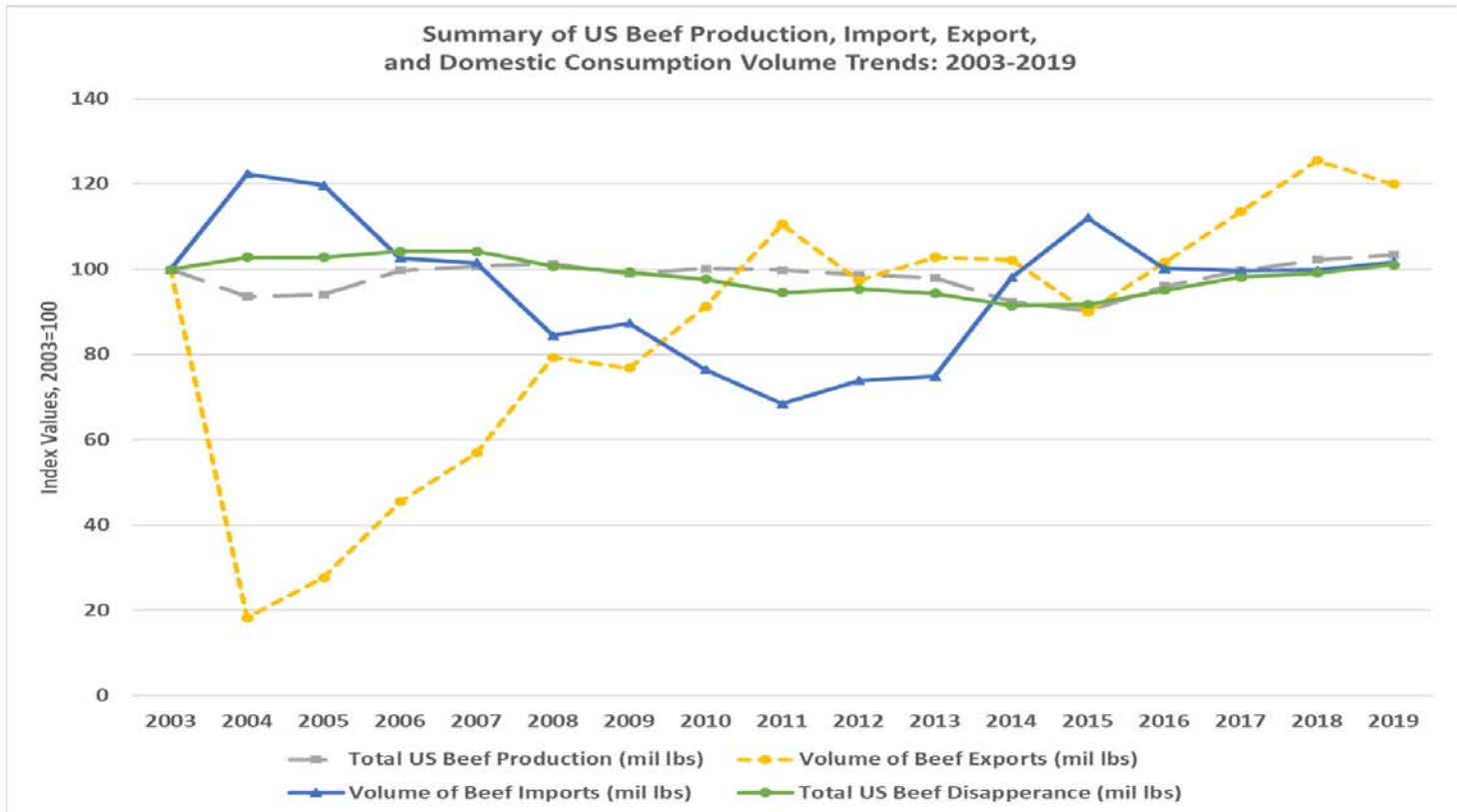
In 2019 total US beef production was 27.23 billion pounds, 3.02 billion pounds of beef were exported, 3.06 billion pounds of beef were imported, and total domestic beef disappearance was 27.28 billion pounds corresponding to 57.97 pounds per person given US population growth. Therefore, in 2019 11.10% of total US beef production was exported and 11.21% of total US beef disappearance was sourced from imports.

It can be easier to see underlying patterns by normalizing to a base year. The following figures take 2003 as a base year where all statistics are given a value of 100 making trends in subsequent years easier to identify.

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<sup>1</sup> Export value per head (\$/head) harvested values are reported by the United States Meat Export Federation and all other reported values used here are obtained from the Livestock Marketing Information Center.

<sup>2</sup> <https://www.economist.com/united-states/2003/12/30/the-cow-who-stole-christmas>

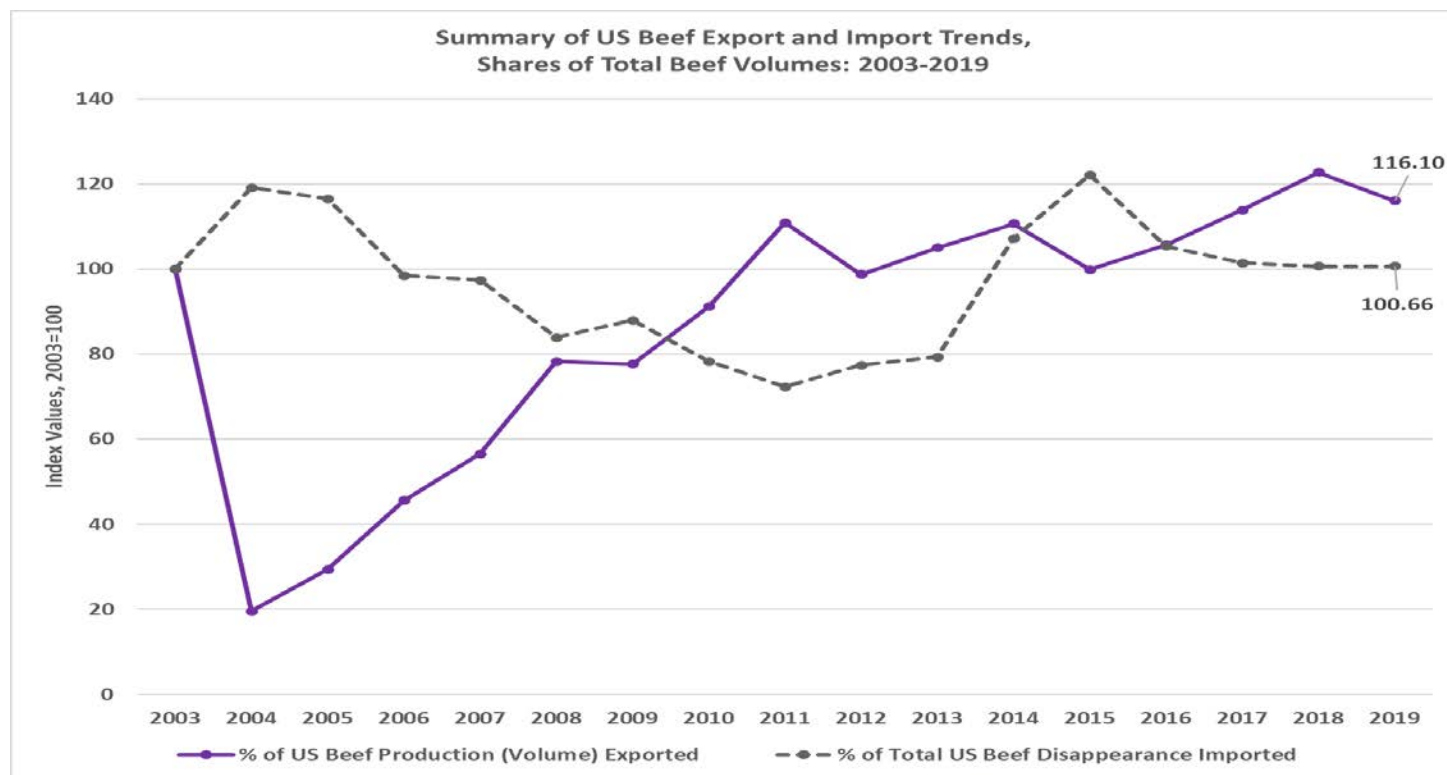


Key points include while beef export volumes declined substantially following the December 2003 BSE event, by 2019 a 20% larger volume was being exported than in 2003. The volume of imports has varied over time as well with an ultimate combined story of total US beef production and domestic disappearance being more stable. Stated differently, adjustments in export and import flows collectively serve to smooth out total volumes of beef available for US consumers. In fact, there is a -0.53 correlation between annual export and import flows consistent with imports increasing when exports decline, and vice versa – a pattern which is visually apparent in the following figure. While this may be surprising, this synergistic relationship reflects differences in products involved, the role of imported products as inputs (commonly for ground beef production) into US domestic consumption markets, and value differences associated with these volume flows.

**Relative Shares: Imports and Exports**

To provide further context on the relative impact of import and export volumes, it is also useful to plot those trends against a base year value in 2003. As shown in the following figure, the share of domestic beef production exported fell by 80% in 2004 following the BSE event late in 2003 and largely has increased ever-since with 2019 volumes being 16% above 2003 levels. Meanwhile, the relative volume of imports as a share of domestic beef disappearance has

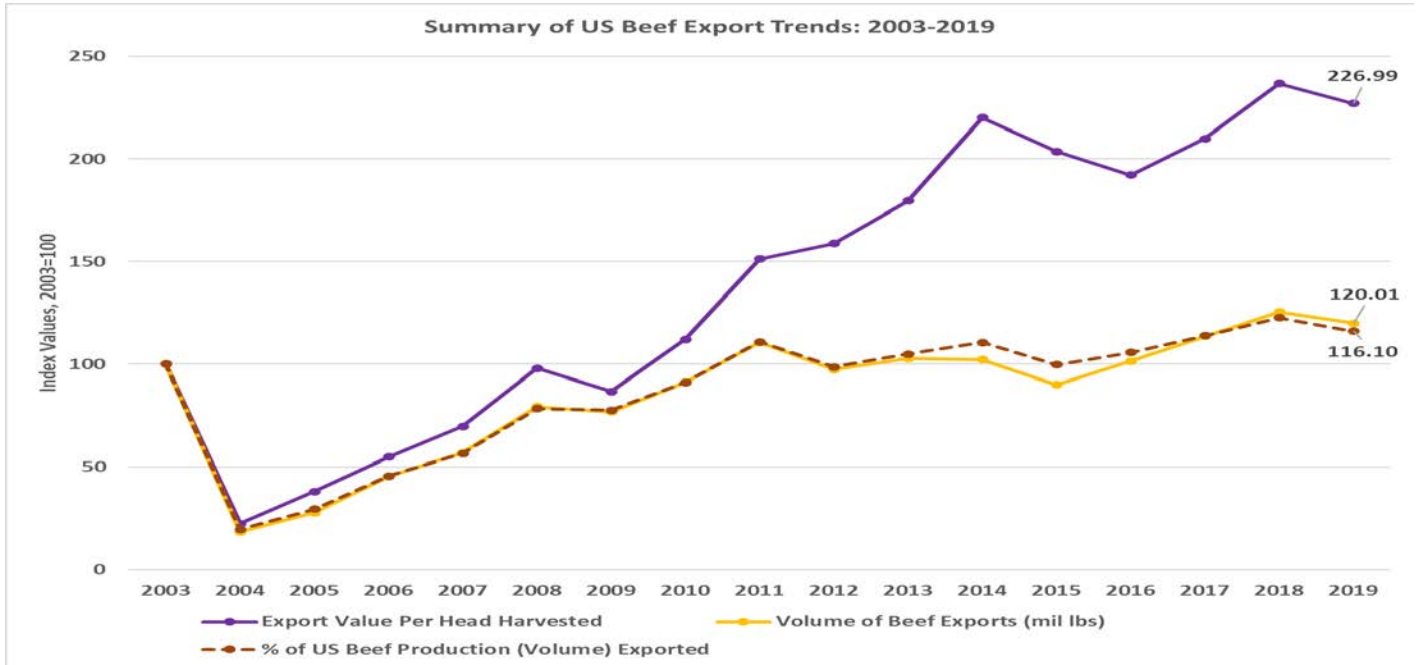
varied within the period, growing most during 2014-2015 with high domestic cattle and beef prices, and by 2019 was within 1% of 2003 levels.



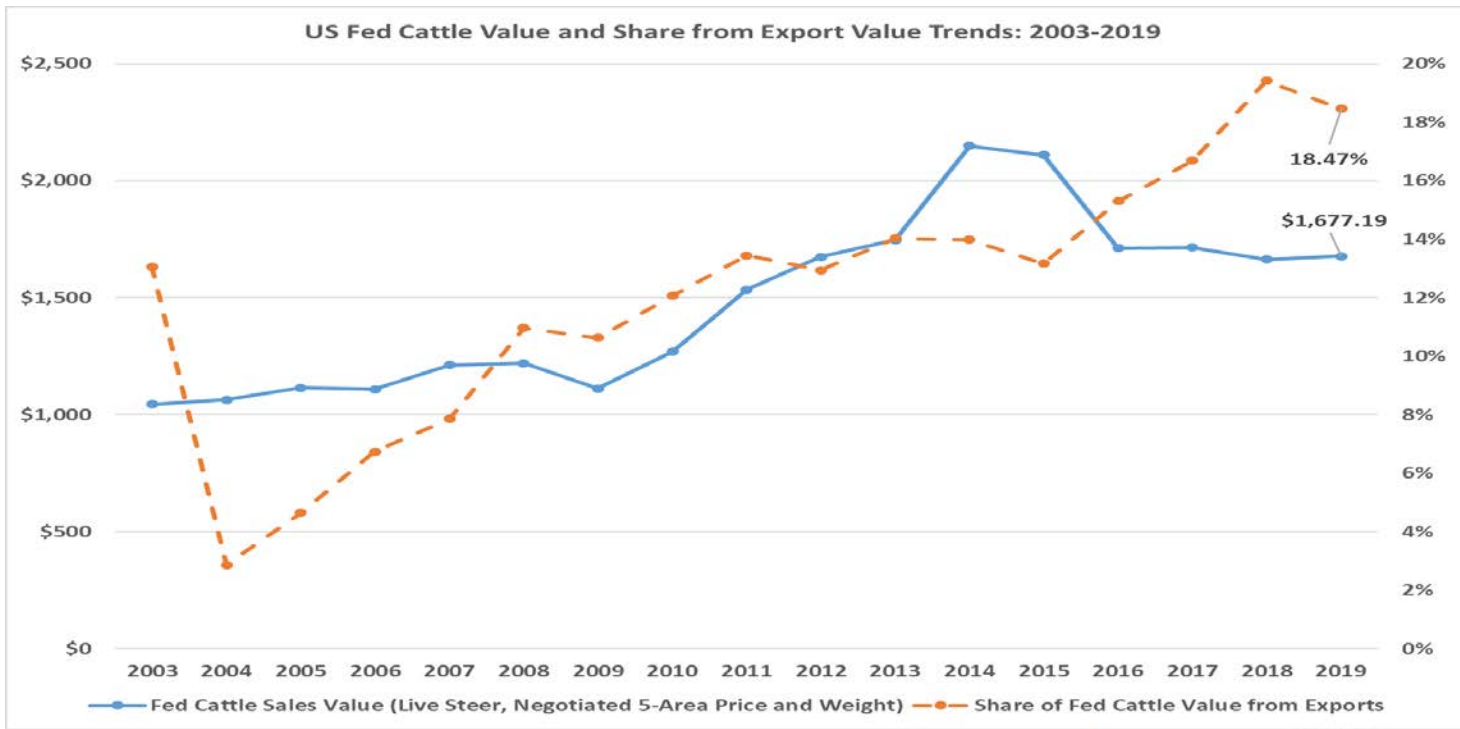
**Importance of Export Value Hidden in Volume Statistics**

While the above information accurately reflects volume patterns, a deeper assessment considering prices and values is needed to fully reveal the growing economic importance of exports. The next figure shows that particularly since the Great Recession period of 2008-2010, the value exports provide on each animal harvested has grown much more than changes in either the volume or the share of US beef production that is exported. Effectively this indicates that simply comparing product volumes understates the economic importance of US beef exports and export markets have matured to increase value for several individual cuts and products embedded in total per head statistics.

In 2019 the United States Meat Export Federation reports the export value per head was \$309.75, a value more than double the pre-BSE value of \$136.46 and over ten-fold the 2004 value of \$30.49 that corresponds with a period when Canada and Mexico largely were the only markets accepting US beef.



This final figure conveys the growing importance of exports in a different way by showing fed cattle per head sales values and the share of that value associated with export value. In fact, the export value per head and total fed cattle sales value are strongly and positively correlated (+0.88) over the 2003-2019 period reaffirming the economic contribution of exports to fed cattle value.



**Summary**

This fact sheet aims to provide a timely overview of long-term trends, well in placed before COVID-19, in the volumes of beef produced in the US and the roles of both exports and imports play in the industry. Hopefully this and related data-driven resources can help guide more informed decision-making.

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