

# Food and Agribusiness Market Update

Industry Consulting Team | Q1 2023

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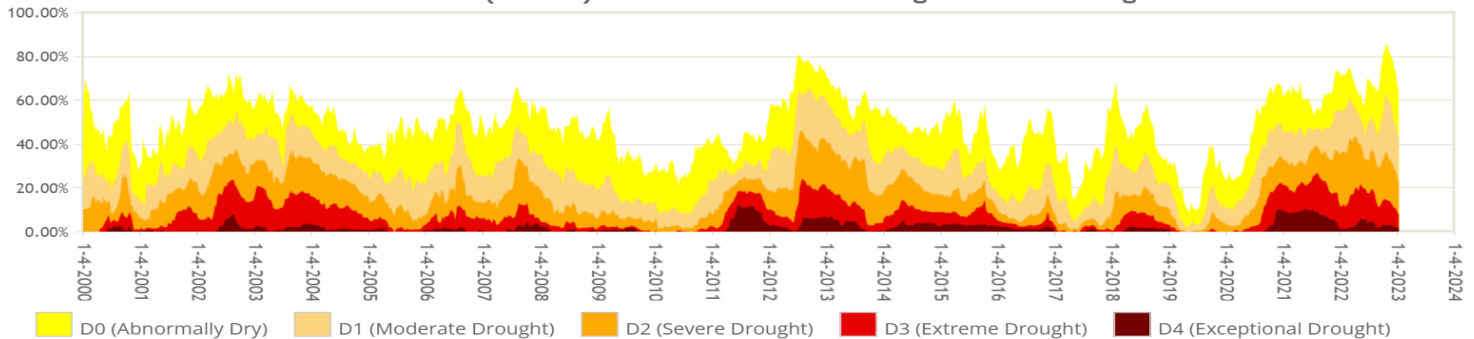
## Where's the Beef?

In 1984, Wendy's introduced what would go on to become one of the most iconic commercials of all time. The strategy at the time was to show that the Wendy's hamburger had more beef than its competition. Actress Clara Peller walks into a burger chain restaurant and receives a large bun and only a small beef patty. She was supposed to say, "Where is all the beef?" She suffered from emphysema and had trouble with that phrase. Instead, she said the now famous line, "Where's the beef?" The US beef industry is in for some challenging times ahead. We may be asking that same question again, but for entirely different reasons.

## Record Drought

The ongoing drought has wreaked havoc in agriculture over the last 24 months. As depicted in the chart below, the current drought is the worst since the establishment of the US Drought Monitor in 2000, surpassing the previous severe drought of 2011 and 2012. Initially, the drought affected various regions at different times across the northern, southern, and central plains, but its cumulative effects eventually impacted a vast majority of the United States. Some experts believe that this could potentially be the worst drought in the western US in nearly 500 years.

Continental U.S. (CONUS) Percent Area in U.S. Drought Monitor Categories



## Cattle on Feedlots

Due to the deteriorating conditions in regions where cattle are raised, with drying pastureland, scarce water resources, and ranchers' reluctance to supplement feed, many were forced to sell or transfer their cattle to feedlots. This resulted in historically high numbers of cattle on feed. The peak in cattle inventory in 2018 should have been followed by declining numbers of cattle on feed. However, the lack of suitable pastureland kept those numbers high. This made it difficult to accommodate the cattle, leading to an increase in the number of calves and heifers being moved to feedlots. Recent data shows that placements are starting to decline, indicating a weakness in the cattle herd. The projected cattle inventory for 2022 is expected to drop to under 89 million, a low not seen since 1952. The number of beef cows in the US is down to 28.9 million, the lowest since 1962. The net cow culling rate for 2022 is expected to reach a record high of 13.5%, surpassing even the drought of 2012. The expansion and contraction of cattle herds in response to the profitability of producers is typical and happens every 8 to 12 years. The last two cycles have been expedited by drought.



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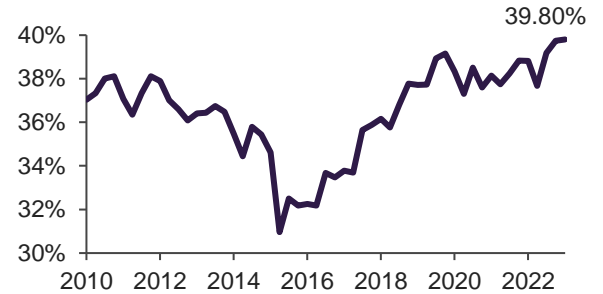
## Rebuilding the Herd

Given the high numbers of cattle on feed and the projected decrease in herd numbers, the future focus will shift toward rebuilding the herd. The record percentage of heifers on feed, as shown on the top right chart, is a result of the ongoing drought. Ranchers typically retain more heifers as breeding stock, but due to the drought ranchers had very little choice but to move those cattle to feedlots. The year-over-year change in the female beef cow inventory is expected to reach a record low, with a decrease of nearly 5%. The bottom right chart further highlights this trend, as the female slaughter as a percentage of cattle has been steadily rising since 2021 and is projected to be over 52% by 2022, surpassing the 1984 record.

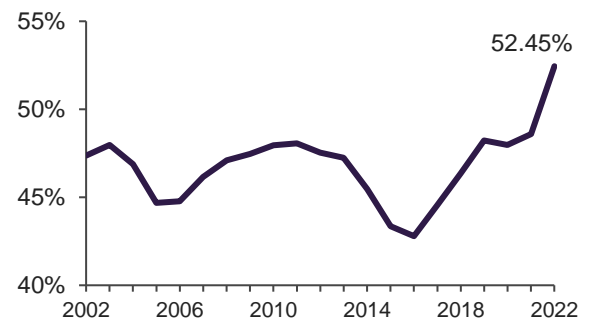
This creates significant challenges in rebuilding the herd. Similar events, nearly a decade ago, led to significant heifer retention. The same scenario is expected to repeat in 2023, except the time frame for rebuilding will take longer. High numbers of healthy heifers will be held back for breeding. As ranchers shift their focus towards rebuilding the herd, there will be fewer cattle on feed lots and fewer cattle to process. 2023 is expected to mark the start of a downward trend in cattle slaughter and cattle on feed. Despite declining inventory, beef production has reached record levels. This trend is expected to change, as beef consumption is directly tied to supply, and there will be less beef production going forward. However, this does not mean that beef demand is declining. The decrease in beef consumption will be because of less beef production and not necessarily a reflection of demand. In other words, we can only consume beef if it is produced.

## USDA Female Cattle Statistics

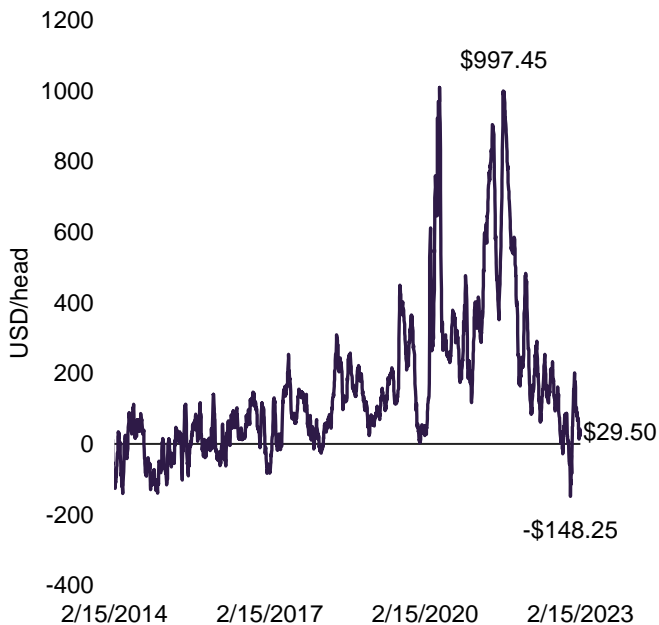
### Heifers on Feed as Percent of Total Cattle on Feed



### Cow and Heifer Slaughter as a Percent of Total Cattle Slaughter



## U.S. Beef Packers Profit Margin



## Packer Margins are Tightening

This graph on the left shows the beef profit margins for packers per head of cattle. The spike in profit is a combination of an oversupply of cattle in recent years combined with COVID causing disruptions at packing plants and a spike in consumer demand for beef.

Pre-COVID, the 5-year average profit margin from 2015 to 2019 was \$251 per head. In 2020, the average profit margin increased to \$464.24 per head; in 2021, it rose to \$641.33. For the first few months of 2022, margins remained above \$440, but then took a sharp decline. In August of 2021, the profit margin per head was nearly \$1,000, but by August 2022, it had dropped to \$137. The compression of margins is partly due to rising feeder cattle prices and the increasing cost of gain. These factors, along with the low cattle inventory numbers, will lead to continued pressure on packers' profits.

This pattern has occurred before, with a similar decline in cattle inventories related to the 2011 and 2012 drought, which resulted in a drastic decline in profit margins for packers in 2014 and 2015. This time around, the factors leading to this cycle are even more pronounced. The good news for ranchers is, if they can get some rain and improved pasture conditions, they will likely experience a couple of years of favorable pricing. To summarize, while packers have enjoyed substantial profits in recent years, that is likely to change due to low cattle inventory numbers, which had a similar impact on profit margins in 2014 and 2015.



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## Beef Production and 2023 Forecast

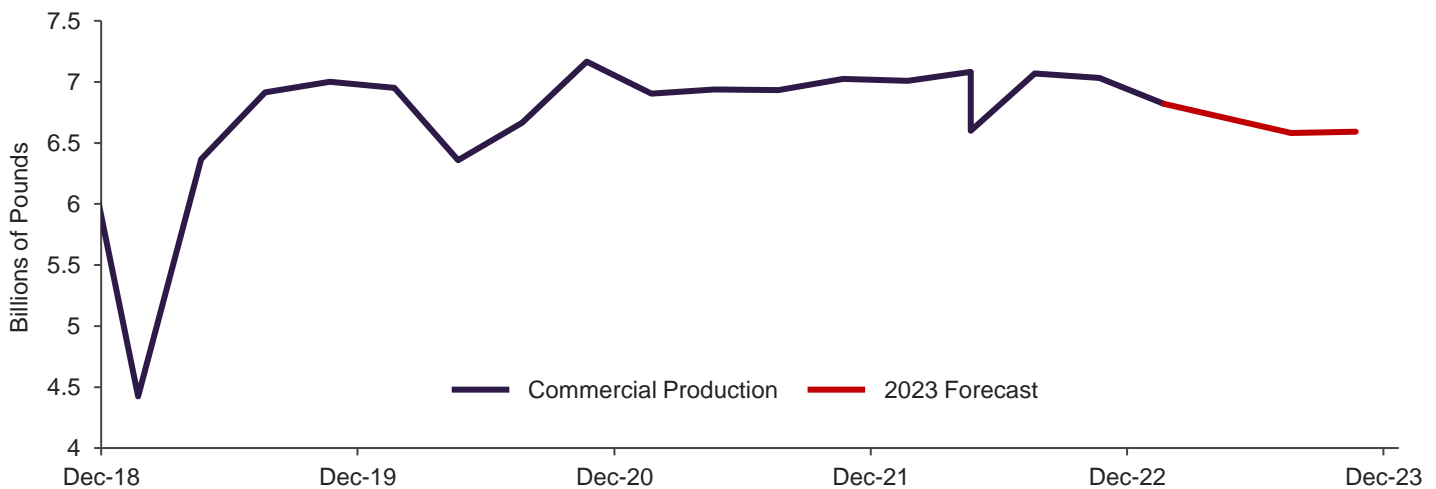
Moving cattle to feedlots is a critical step in the beef production process, as it is where the cattle are finished before being sold to meat processors. The cost of gain, which refers to the cost of adding weight to cattle at the feedlot, is closely tied to corn prices and has been a significant challenge for feedlot operators. In 2021, the cost of gain for steers started at \$82/cwt (hundredweight) but quickly rose to \$110/cwt by the end of the year. This trend has continued into 2022 with the cost of gain for steers reaching \$135/cwt and for heifers reaching \$145/cwt, marking an increase of around 64% from the 2019 levels.

The current cost of gain is at a record high and presents a major challenge for feedlot operators who are already operating on tight margins. The outlook for the near future remains uncertain, with no immediate relief in sight. The chart below presents a 6-year report of beef production. The red line represents the quarterly forecast for beef production in 2023.

Over the past two years, beef production has been robust with each year coming in at around 28 billion pounds produced by packers. A drop in production is forecast for 2023 with estimates of around 26.5 billion pounds (6% decrease year over year). The decrease in production will likely lead to an increase in beef prices, as the market adjusts to balance supply and demand. This scenario is similar to what was experienced in 2014 and 2015, when beef prices were around \$295/cwt compared to \$195/cwt in 2013 and \$163/cwt in 2012.

In conclusion, the market will determine the price of beef based on supply and demand, and it is likely that beef prices will continue to rise in response to declining production levels.

### Quarterly Commercial Beef Production 2018-2023F



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Sources: US Drought Monitor, Bloomberg, USDA, Oklahoma State University Dr. Peel, Drovers, University of Arkansas Division of Agriculture