

## Tennessee Feeder Cattle Prices Influenced by COVID-19

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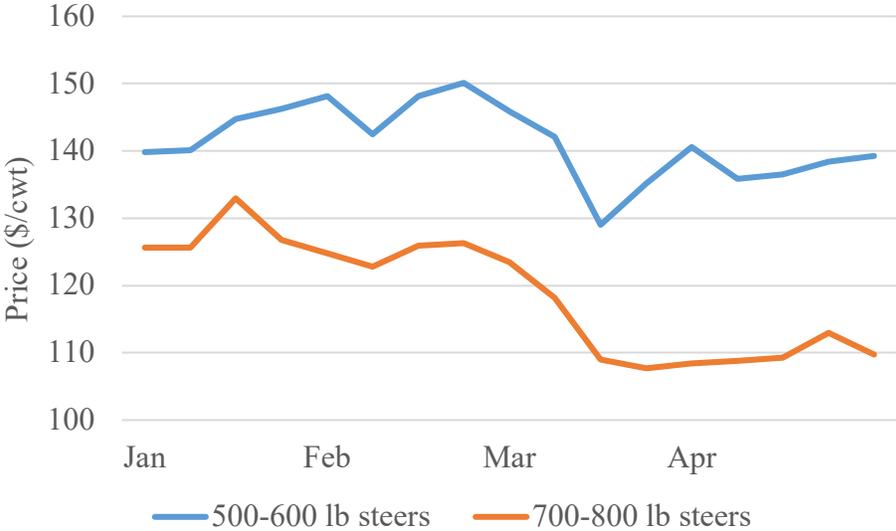
Feeder cattle prices are driven by supply and demand for live cattle (i.e., finished cattle) that are in turn driven by supply and demand for beef. Supply and demand in the cattle and beef industries change seasonally, resulting in seasonal price changes for feeder cattle, finished cattle and beef. For example, on the cattle side, many cow-calf producers calve in late winter and early spring months (February and March) and market cattle in the fall (October and November). The increased supply of lower-weighted calves (i.e., less than 600 pounds) induces lower prices in the fall, whereas in the spring (March or April), there is a lower supply of animals under 600 pounds that typically sell at higher prices. Additionally, the timing of calving greatly influences when an animal will enter the feedlot and thereby when it will be harvested. From a beef demand perspective, the greatest demand for beef generally occurs during the summer grilling months, and the softest demand occurs during the winter months. Thus, these factors also seasonally influence feeder cattle prices.

Outside of supply and demand for beef, feeder cattle prices are regularly influenced by changes in feed prices, as feed costs are a large component of feedlot production costs. However, there are occasions when other external (exogenous) shocks influence feeder cattle prices, such as bovine spongiform encephalopathy (BSE) in 2003, drought in 2011 and 2012, and the Tyson beef packing facility fire in 2019. Each of these external shocks affected the typical supply and demand of finished cattle, which also transmitted to feeder cattle prices. Though these shocks were exogenous to the market, they were primarily isolated to the cattle industry or agricultural production industries; that is, they did not involve the broader United States population.

Coronavirus (COVID-19) is another external shock influencing cattle prices in early 2020. The difference between COVID-19 and the external shocks discussed above is that coronavirus influenced most national and international markets, not just beef cattle. The purpose of this publication is to illustrate how Tennessee feeder cattle prices were impacted by COVID-19 in the first four months of 2020, compared to those same four months historically (based on data for cattle sold through Tennessee auction markets reported by USDA-AMS).

### Coronavirus Timeline

COVID-19 was first reported in the United States on January 20, 2020. The World Health Organization declared coronavirus to be a pandemic on March 11, with the United States government declaring a national emergency for COVID-19 on March 13, 2020. The rapid spread of the virus shuttered businesses across the nation and did not spare restaurants and food service establishments. Additionally, the contagious nature of coronavirus caused several beef slaughter and packing facilities to close temporarily for disinfection and to add safety measures for employees (Bagentose et al., 2020; Reuters 2020). These factors triggered a decline in Tennessee feeder cattle prices (**Figure 1**).



**Figure 1. Weekly Average Steer Prices Reported Through Tennessee Auction Markets From January Through April of 2020.**

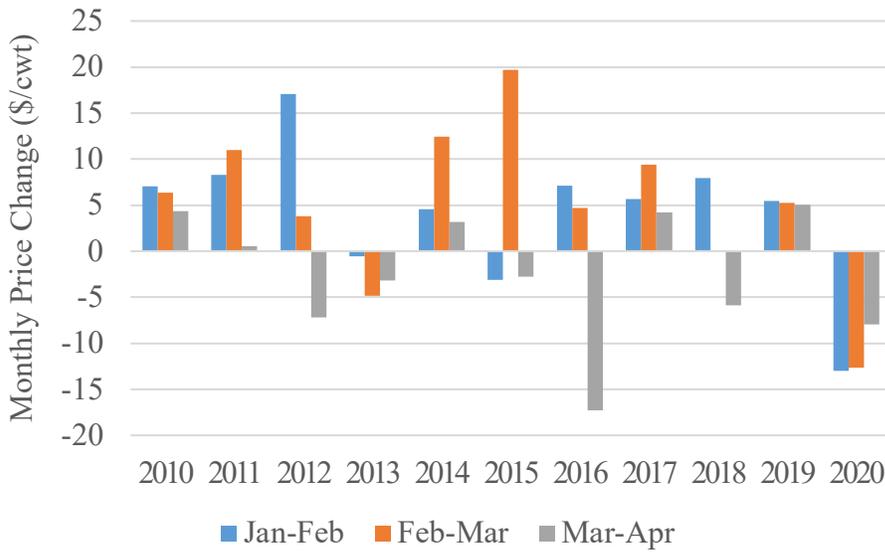
Source: USDA-AMS

## Cattle Prices

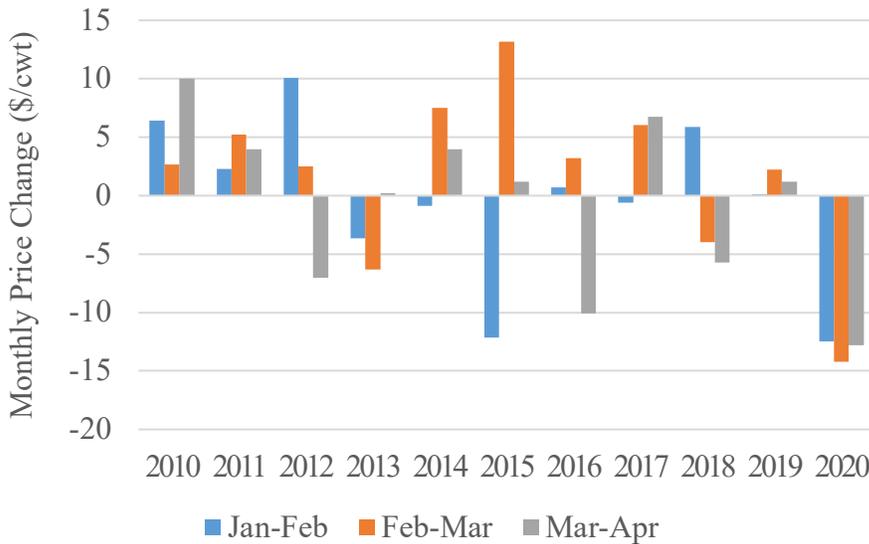
Feeder cattle prices started 2020 on a fairly strong note, but that strength quickly dissipated with the onset of the coronavirus. The first quarter of the year is generally a time when lighter weight feeder cattle (less than 600 pounds) prices are escalating. From 2010 through 2019, the price of 500- to 600-pound steers in Tennessee increased 80 percent of the time from January to February, 90 percent of the time from February to March and 50 percent of the time from March to April (**Figure 2**). The average price change over the 10-year period was an increase of \$5.95 per hundredweight (cwt) for January to February and \$6.79 per hundredweight for February to March, while the average price change from March to April was a decline of \$1.89 per hundredweight. **Figure 2** illustrates the change in price from one month to the next from January through April for the years 2010 through 2020.

**Figure 2** clearly illustrates the impact COVID-19 had on 500- to 600-pound steers in Tennessee from January through April. During months when prices were expected to increase, they decreased for three consecutive months for a total price decline of \$33.60 per hundredweight. The monthly change in prices from January to February (-\$12.98/cwt) and from February to March (-\$12.65/cwt) showed the largest monthly decline in price as compared to those same months in the previous decade. From March 2020 to April 2020, the price suffered a larger decline (-\$7.97/cwt) than for the same months in all 10 prior years, with the exception of 2016 when feeder cattle prices were coming off their historical peak price. Even excluding the typical seasonal increase in value over the last 10 years, the coronavirus still resulted in a \$185-per-head (550 lb. x \$33.60/cwt) decline in the value of 550-pound steers from January through April.

Similar to the lighter-weighted feeder cattle, the heavier-weighted feeder cattle prices suffered from the impacts of coronavirus. **Figure 3** illustrates month-to-month price changes of 700- to 800-pound steers marketed in Tennessee from January through April for 2010 through 2020. In the 10 years prior to 2020, prices increased 60 percent of the time for January to February, 80 percent of the time from February to March and 70 percent of the time from March to April. The average month-to-month price change over that 10-year span was \$0.83, \$3.22 and \$0.45 for January to February, February to March, and March to April, respectively. However, the total price change from January to April in 2020 was a decline of \$39.50 per hundredweight, which equates to a \$296 per head loss (750 lb. x \$39.50/cwt) in value from the end of January to the end of April.



**Figure 2. Month-to-Month Price Changes From January Through April for 500- to 600-pound steers in Tennessee From 2010 Through 2020.**



**Figure 3. Month-to-Month Price Changes From January Through April for 700- to 800-Pound Steers in Tennessee From 2010 Through 2020.**

## Conclusions

It is clear COVID-19 negatively influenced Tennessee feeder cattle prices in February, March and April compared to feeder cattle prices in January 2020. The negative impact on prices resulted in cattle producers losing significant value over the three-month period from February through April. However, it is not yet known what the complete impact will be to feeder cattle prices as coronavirus will have a lasting impact on cattle prices throughout the remainder of the year. Given this longer-term impact, some producers may make the decision to retain ownership of cattle through the feedlot stage. However, cattle producers will be forced to market cattle still held at some point. The net change in value cannot be calculated until the cattle are marketed. Thus, calculating the total loss may take even longer if coronavirus continues to negatively impact feeder cattle and finished cattle prices.

## References

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