

# Fed Cattle and Beef Premiums and Discounts: Trends and Implications

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August 2023

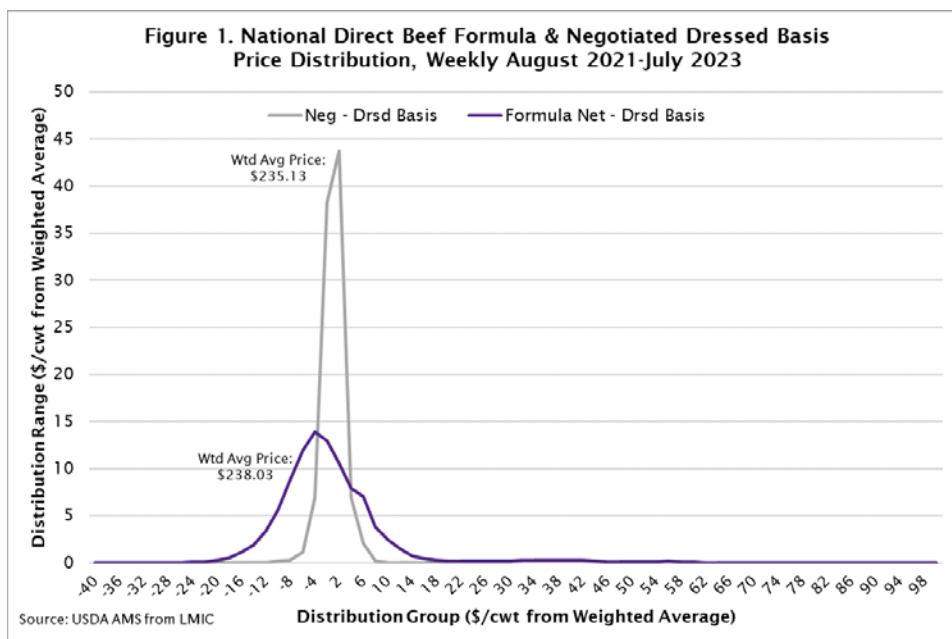
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## INTRODUCTION

Premiums and discounts for US fed cattle have evolved over time in response to changing customer and consumer demand for beef. Dramatically increased use of Alternative Marketing Agreements (AMAs) for fed cattle have shifted overall quality and value of cattle and beef. Grid premiums and discounts for cattle have adapted to shifts experienced by multiple facets of the fed cattle marketing complex.

Premiums and discounts are economically important to producers who market cattle with grid pricing systems. Grid pricing rewards higher quality cattle with higher prices and discounts lower quality cattle. As a result, price variation of formula purchased cattle is much greater than negotiated cash market purchases. Figure 1 summarizes the weekly weighted average distribution of net dressed price variation for fed cattle purchased using formula compared to cash negotiated valuation methods over the time period USDA AMS has published this information.





Under cash negotiated pricing 80% of fed cattle purchased in the typical week received a net dressed price within \$2/cwt (\$4/cwt range) of the weighted average price. In contrast, 80% of formula purchased cattle realized a net dressed price within \$10/cwt (\$20/cwt range) of the weighted average. The much greater variation associated with formula net prices is a direct result of premiums and discounts paid for varied cattle quality and other attributes<sup>1</sup>.

This fact sheet summarizes trends in key grid premiums and discounts and identifies important factors associated with those evolving trends. Producers manage cattle procurement and feeding strategies by utilizing grid pricing systems to effectively market their cattle and maximize profit. Thus, having current information on how premiums and discounts are changing over time is essential for effective fed cattle marketing. Grid pricing greatly increases price signals from downstream customers

<sup>1</sup> The differences in formula pricing and grid pricing methods are discussed in [Grid Pricing of Fed Cattle: Base Prices and Premiums-Discounts](#), available from Oklahoma State University Extension.

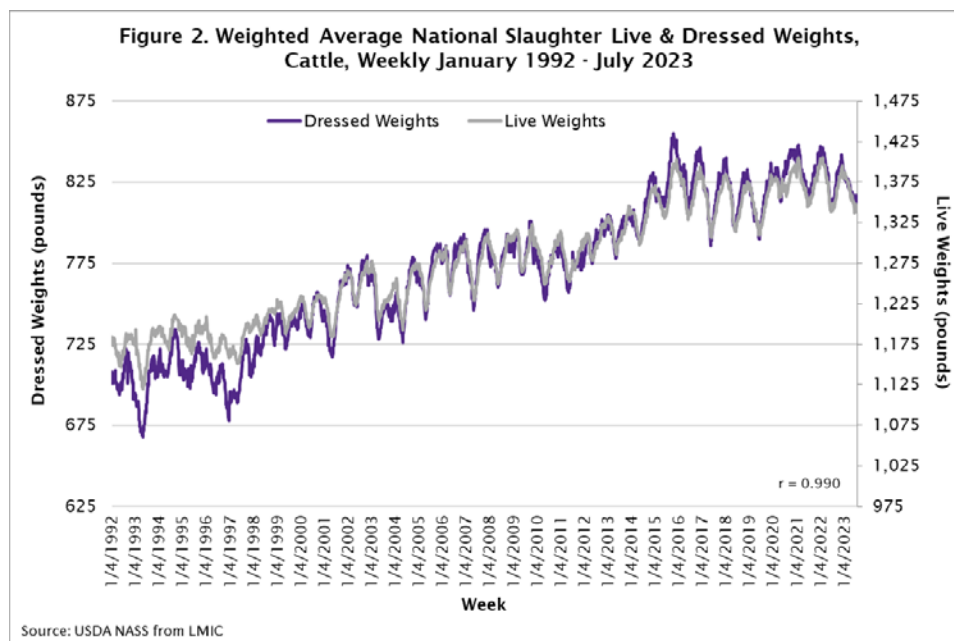
back to cattle producers creating notable incentives to improve cattle and beef quality. However, grid premiums and discounts for some attributes vary over time and across grids in economically important magnitudes that we strongly advise producers to monitor.

## PREMIUMS & DISCOUNTS

### Weight

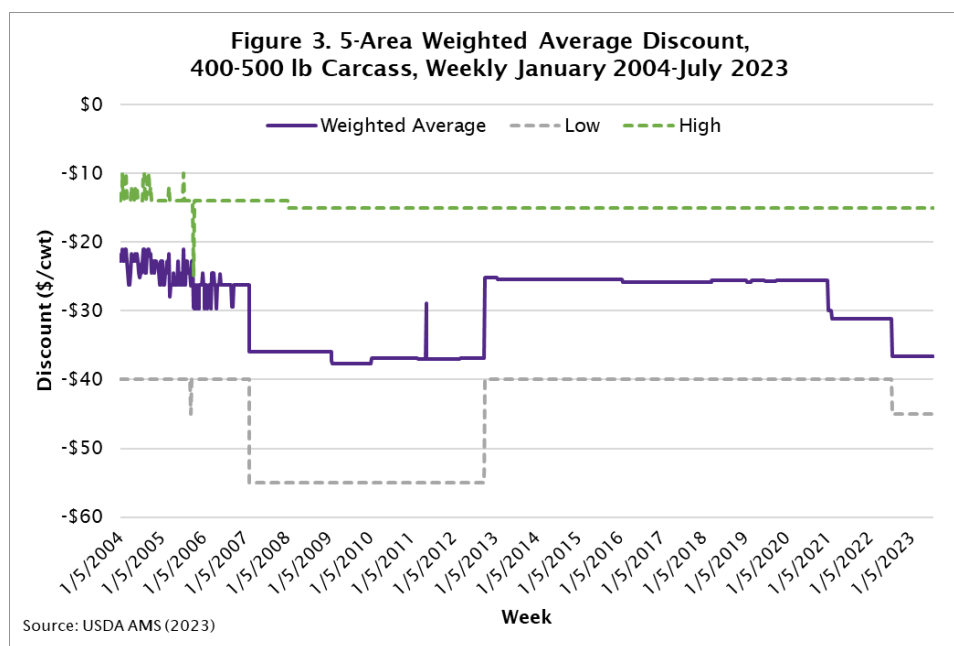
Since the early 1990s, the beef cattle sector has consistently produced heavier weight cattle.

Figure 2 depicts weighted average slaughter weights for live and dressed cattle from January 1992 to July 2023.

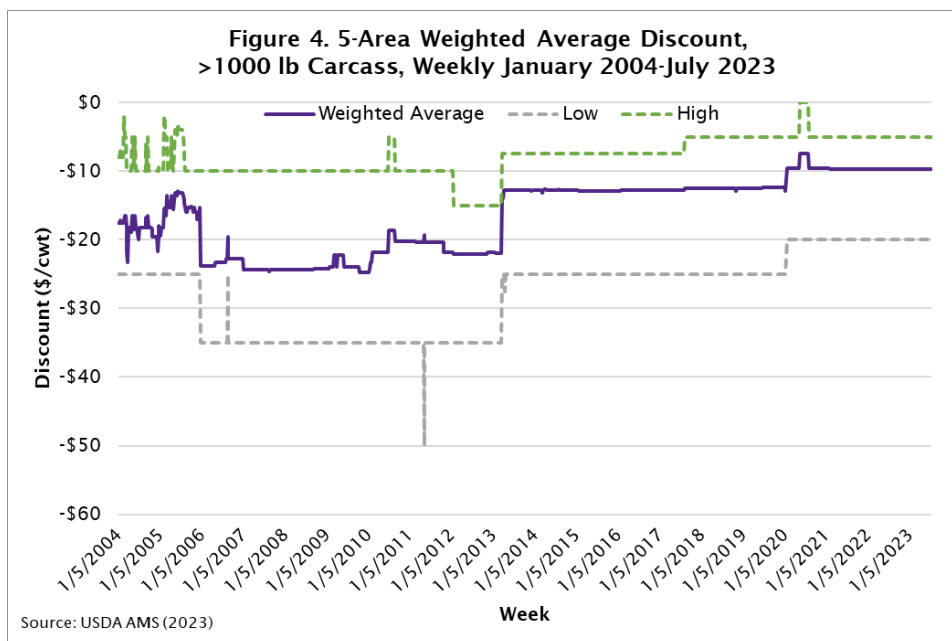


Live and dressed weights are closely related with a 0.990 correlation and upward trending, increasing over 170 and 100 lbs per head, respectively, over the past 30 years.

As cattle have been fed to heavier finished weights, discounts packers apply to light-weight carcasses have widened relative to heavy carcasses. The 5-Area carcasses in the 400-500 lb range have seen a \$10/cwt increased discount from 2004 to 2022 (Figure 3).



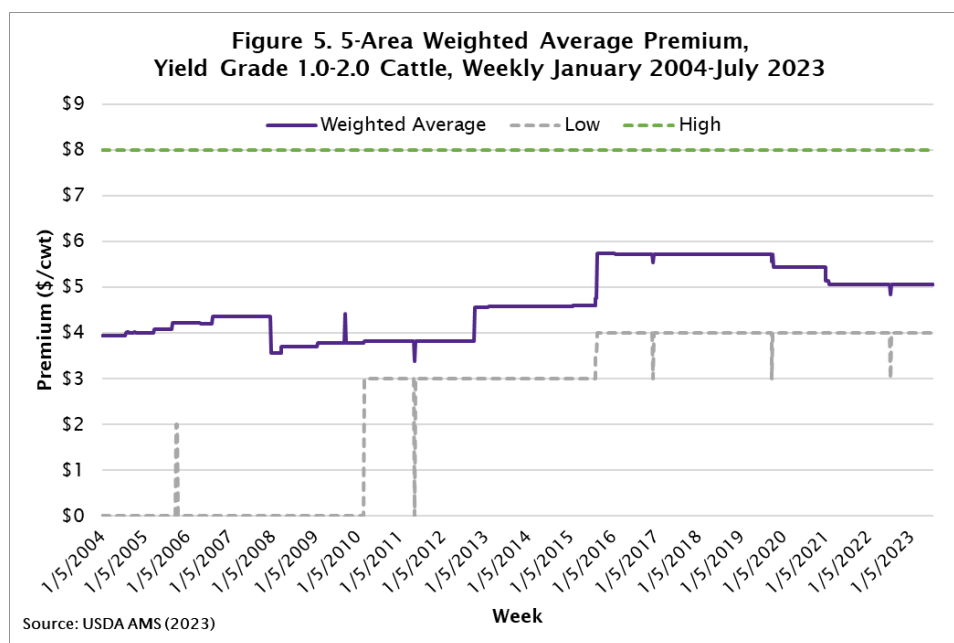
Light-weight carcasses receive economically important discounts of \$30/cwt or more. Figure 4 shows 5-Area cattle with carcasses greater than 1000 lbs experienced \$9/cwt reduced discounts since 2004.



As cattle are sold on a dressed weight grid, heavy-weight carcasses will occur because of the increased value per head of more pounds being worth more than in a live sale. Furthermore, as heavy-weight carcass discounts are less than half what they were just a few years ago, the disincentive for excessive weight cattle in a grid sold pen is less than it was a few years ago. Packers prefer processing heavier carcasses up to a point due to added efficiency. Gains in retail products produced from heavier carcasses enable greater profits for packers that transmit to producers through reduced discounts for heavier carcasses. However, because the ranges in weight discounts are large at more than \$50/cwt for light-weight and \$15/cwt for heavy-weight, knowing specific weight discounts for the grid one is marketing fed cattle in is critical.

## Yield Grade

With the gradual transition to heavier carcasses, relaxed Yield Grade (YG) 4 and 5 discounts have occurred while premiums for YG 1 and 2 cattle have remained steady. For 5-Area cattle in the 1.0-2.0 YG range, premiums have gradually increased since 2004 to a current premium around \$5/cwt (Figure 5).



YG 2.0-3.0 5-Area cattle premiums have also remained consistent with a current premium of just over \$2/cwt as illustrated in Figure 6, implying packer desirability for leaner cattle in the YG 1.0-2.0 range.

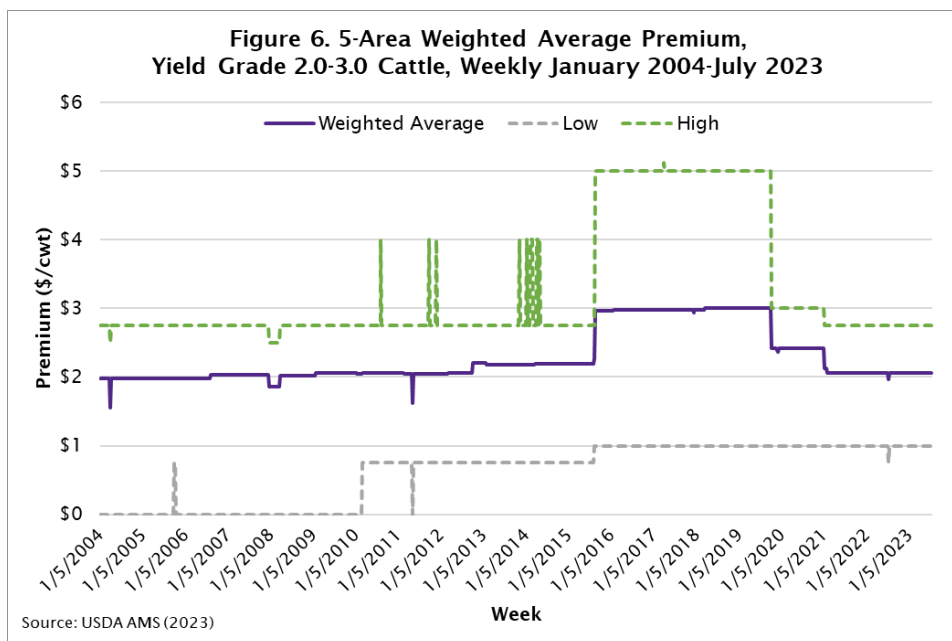
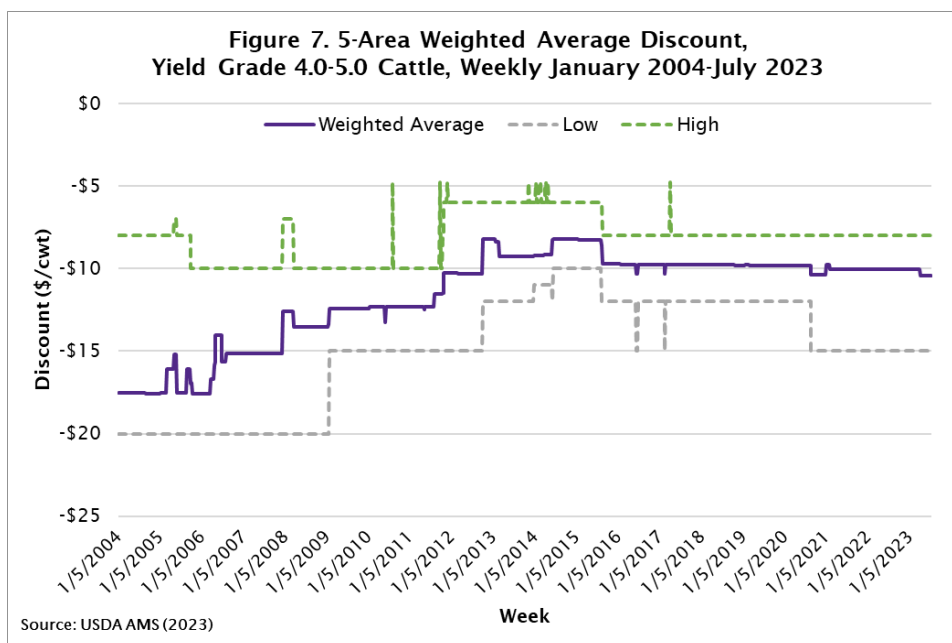
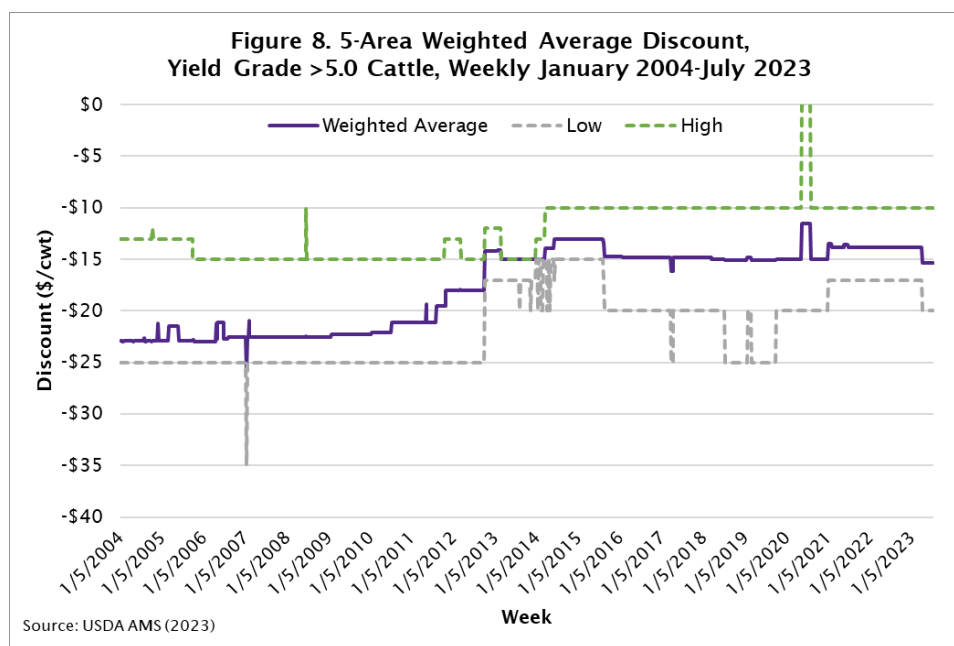


Figure 7 shows 5-Area discount for 4.0-5.0 YG that has seen a range from \$10/cwt to \$15/cwt discount in the early-mid 2000s but has more recently been replaced with a range from \$4/cwt to \$9/cwt.



Additionally, weighted average discounts for YG 4.0-5.0 cattle have been reduced by \$7.50/cwt from 2004 to 2022. Lastly, 5-Area cattle with a YG greater than 5.0 have seen easing discounts by roughly \$9/cwt since 2004 (Figure 8).

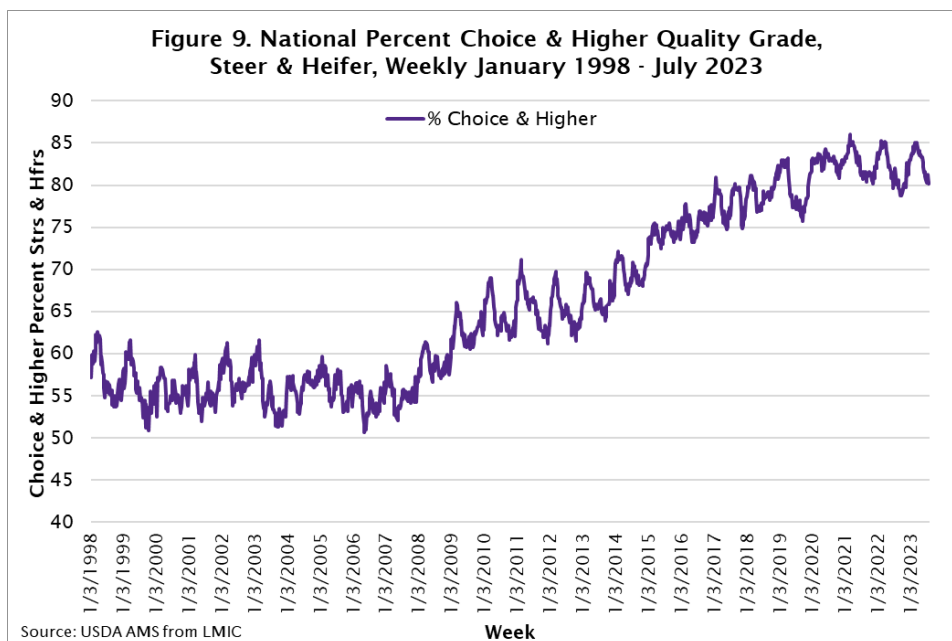


Packers continue to incentivize lean cattle while having a greater allowance for heavier carcasses and cattle with a higher YG.

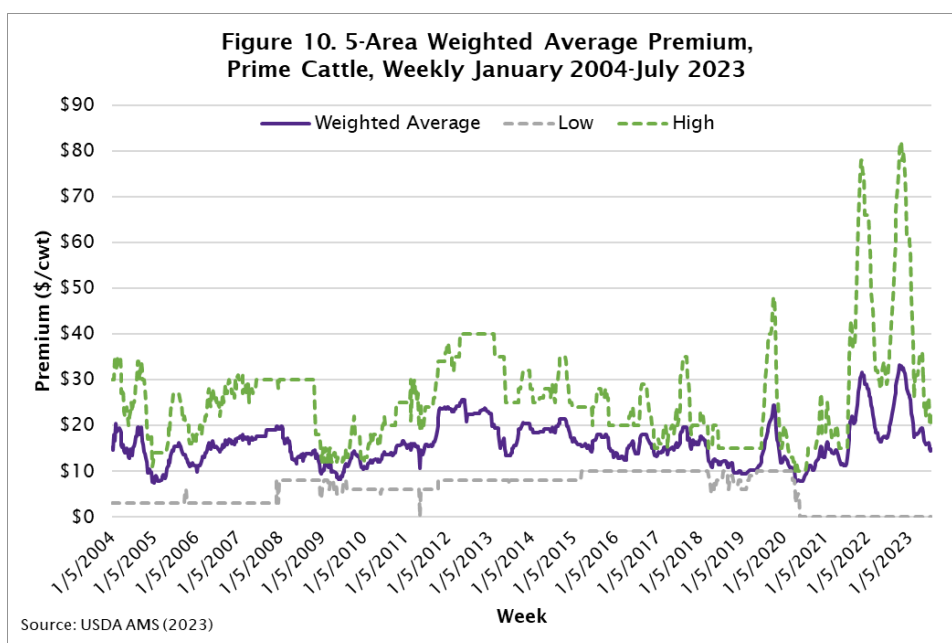
### Quality Grade

Improvement in fed cattle quality has increased with carcass weights. Figure 9 illustrates the percentage of steers and heifers on a national basis that have a quality grade of Choice and higher since 1998.

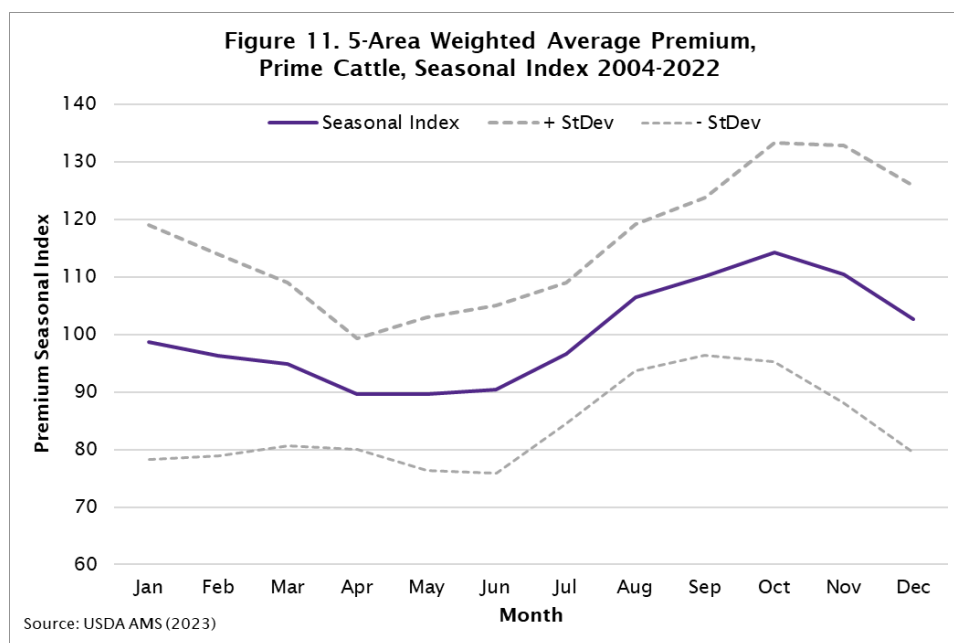




When comparing this data to Figure 2, consistency is seen in positive trends, implying a strong positive correlation between higher marbling scores and heavier carcass weights. Prime carcass premiums experience seasonal trends but remain consistent averaging \$17/cwt from 2012-2022 (Figure 10).

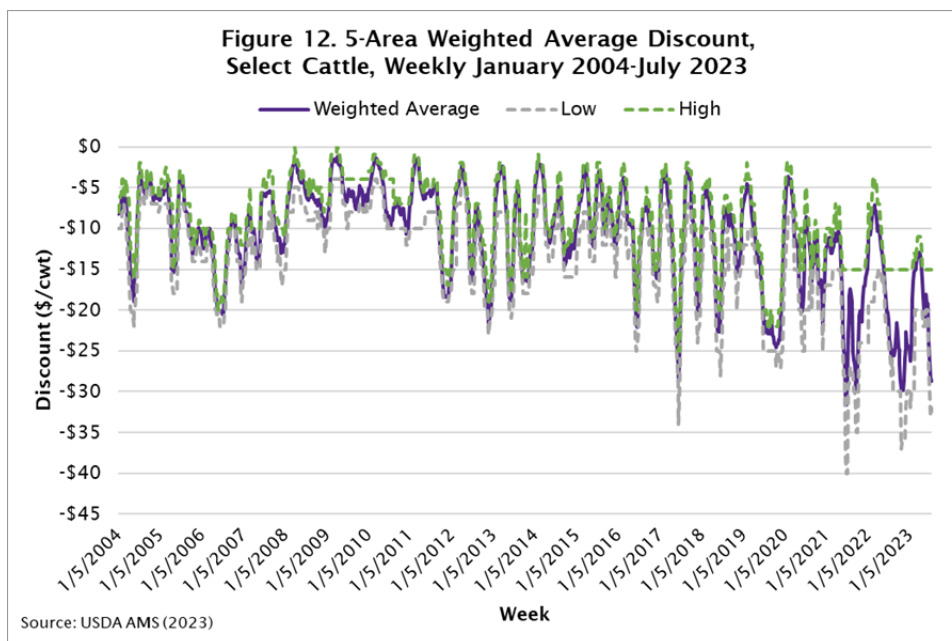


Noteworthy are at times at least one packer grid paid up to \$80/cwt premium for Prime and another paid no premium during some recent weeks in 2023. This stark range in Prime premiums suggests highly varied demand at times for Prime graded carcasses across packers. Figure 11 illustrates the seasonal pattern in Prime premiums with the lowest premiums typically in April, May, and June at about 90% of the annual average and highest in October at about 112%.

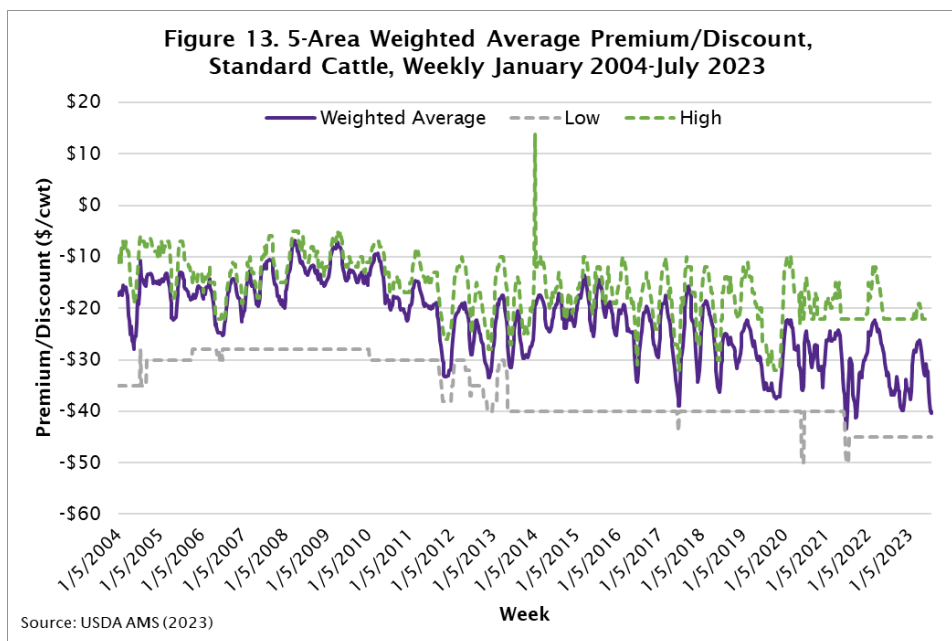


Select cattle have seen an increase in discounts of \$10.50/cwt since 2004 (Figure 12).

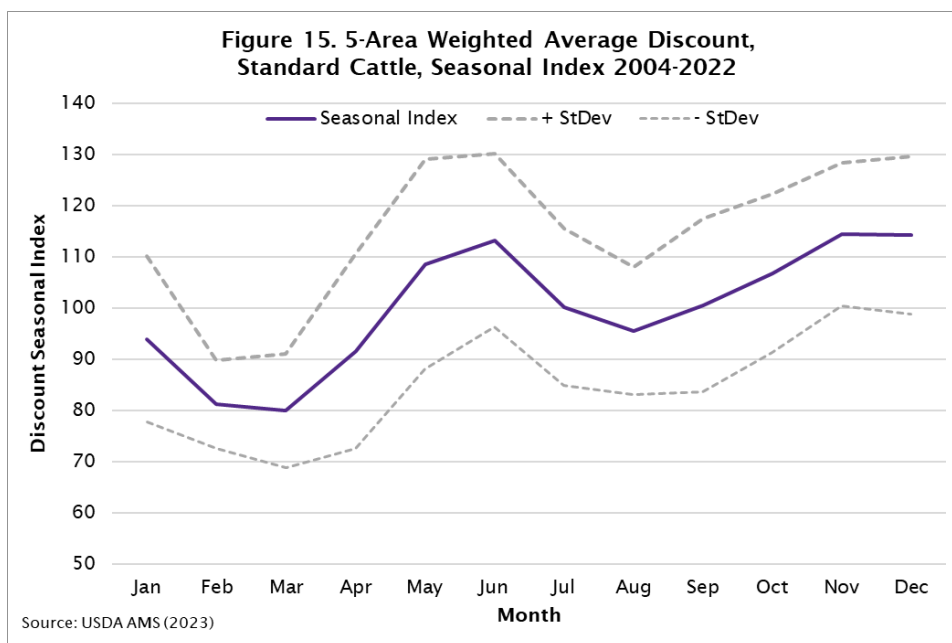
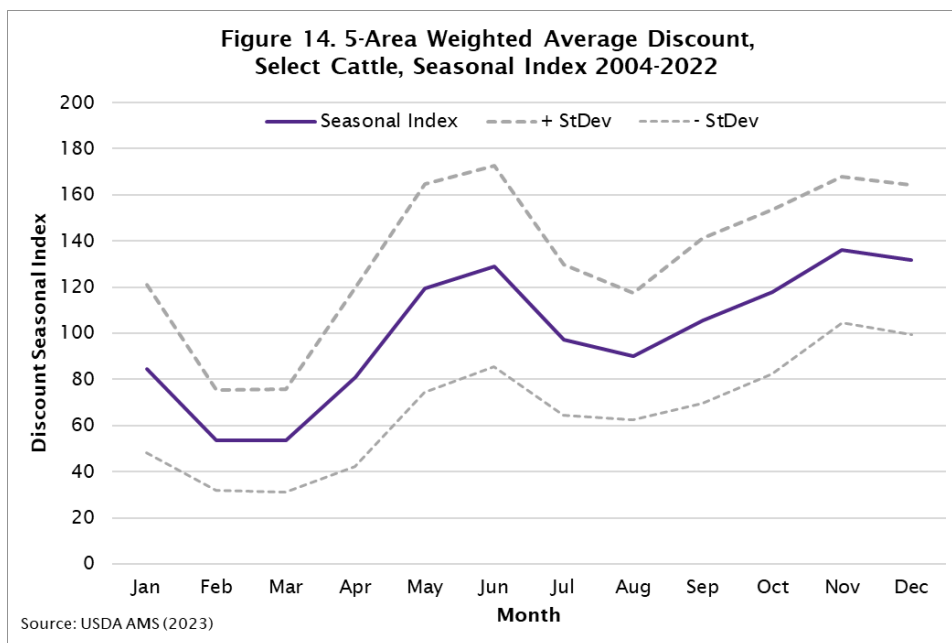




Select discounts vary more week-to-week than most other carcass premiums or discounts. This is because weekly changes in demand and supply of especially Choice and Select grade carcasses cause rapid market adjustments to these prices relative to each other at both wholesale and farm levels. Standard discounts have declined \$14/cwt since 2004 and continue to follow a seasonal pattern, noting consistency in the “low” values (Figure 13).



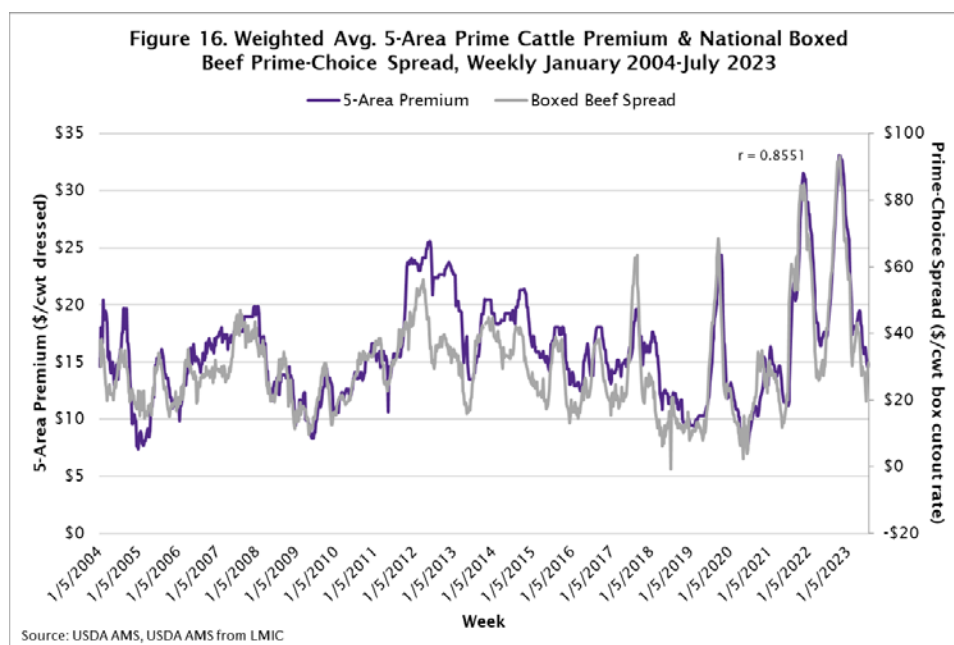
Seasonality in especially Select grade carcass discounts is substantive and directly results from seasonal supply and demand for Choice vs. Select beef. Select and Standard discounts peak in February and March which correlate with the narrowest deviation from the mean; alternatively, discounts see lows in May and June and again in November and December which correlate with wider deviations from the mean based on the seasonal indexes summarized in Figures 14 and 15.



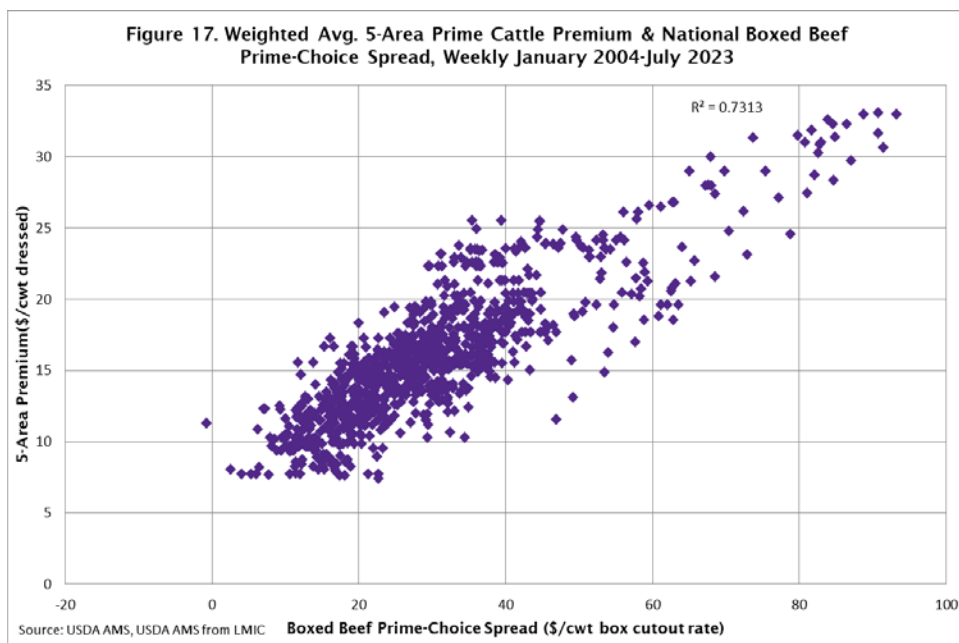
Quality Grade premiums and discounts show a great amount of consistency while emphasizing widening gaps between premium and discounted cattle compared to historical relationships.



Diving further into cattle quality pricing, it's important to observe relationships between 5-Area premiums and discounts and boxed beef spreads recognized in the boxed beef cutout report produced by the USDA AMS. Increased volatility over the past five years is observed in the 5-Area Prime premium and Prime-Choice spread while they saw record high premiums in fall 2021 and 2022 as observed in Figure 16.

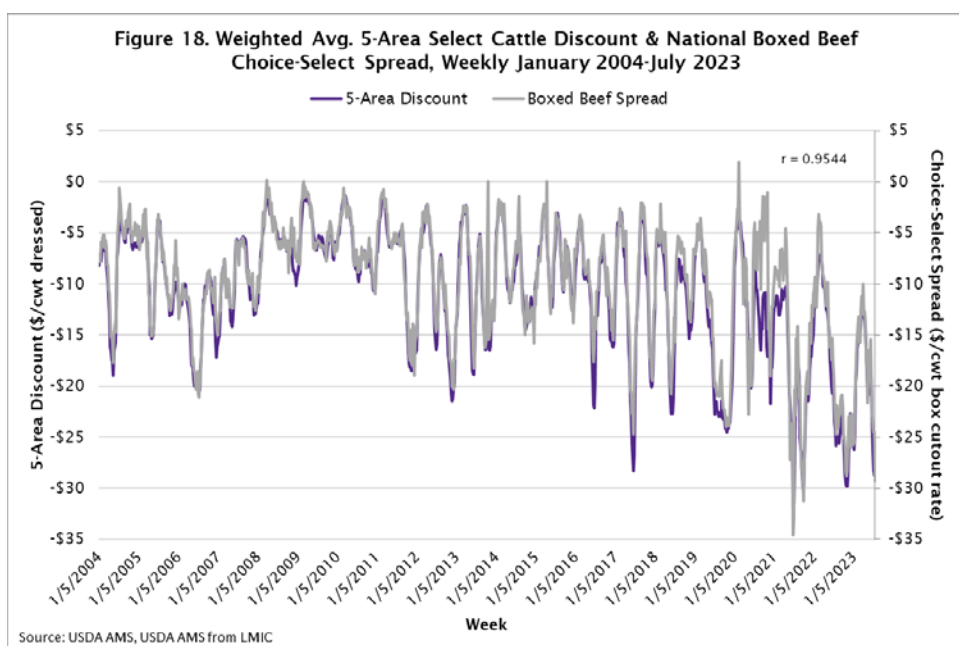


A strong positive correlation of 0.85 ( $R^2$  0.73) is seen between the 5-Area Prime premiums and the Prime-Choice boxed beef spread since 2004 (Figure 17).



This demonstrates how closely linked grid quality premiums for Prime are to the wholesale market.

Similar to the Prime comparison, the 5-Area Select discounts and wholesale market Choice-Select Spread is illustrated in Figure 18.



The spread is increasingly volatile in recent years for both grids and wholesale markets, seeing historically high discounts in June 2021, both over  $-\$30/\text{cwt}$ . The Select discounts are the highest correlated values with a correlation of 0.95 ( $R^2$  0.91) compared to the other Quality Grades (Figure 19).

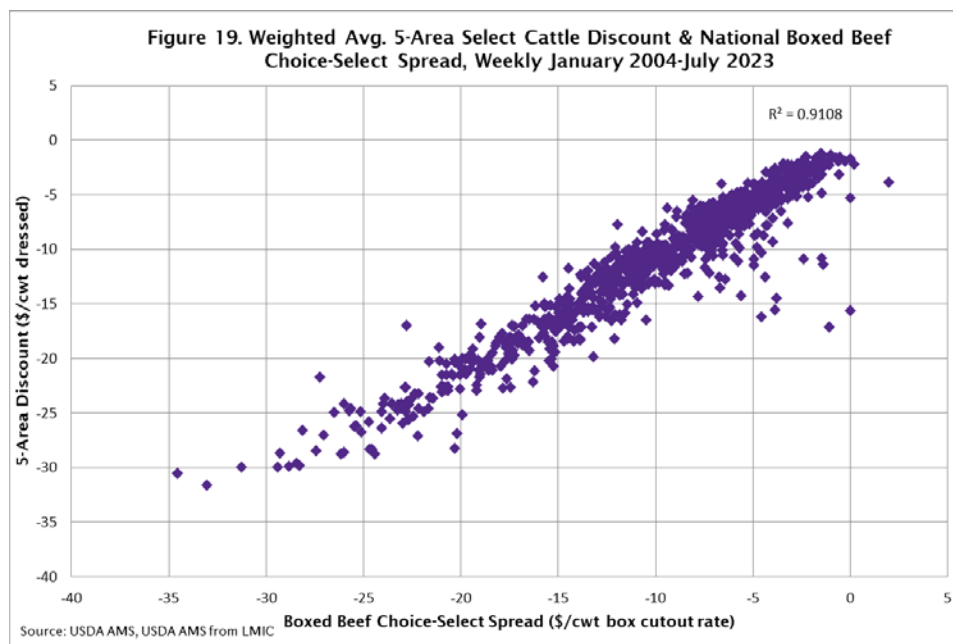
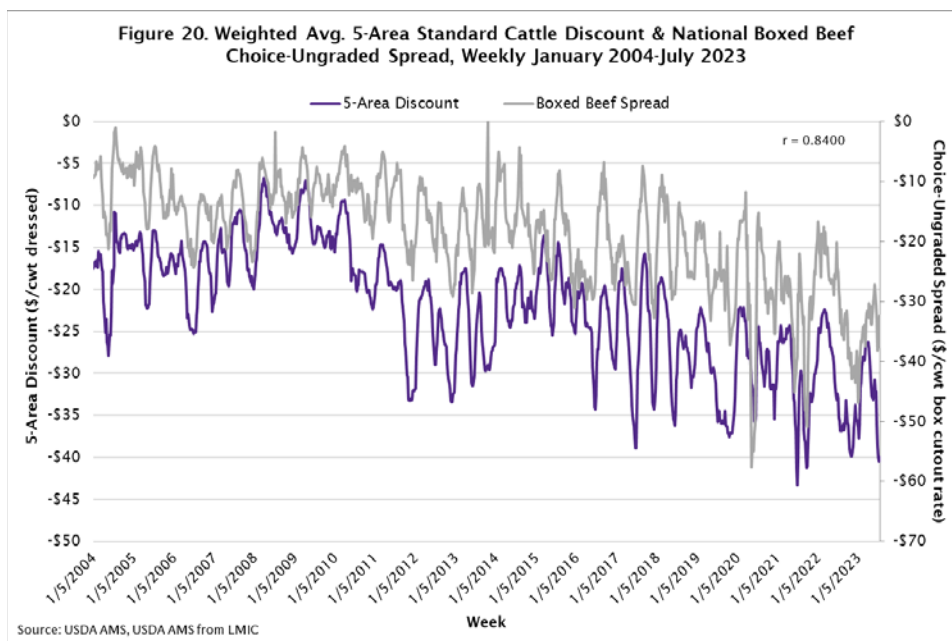
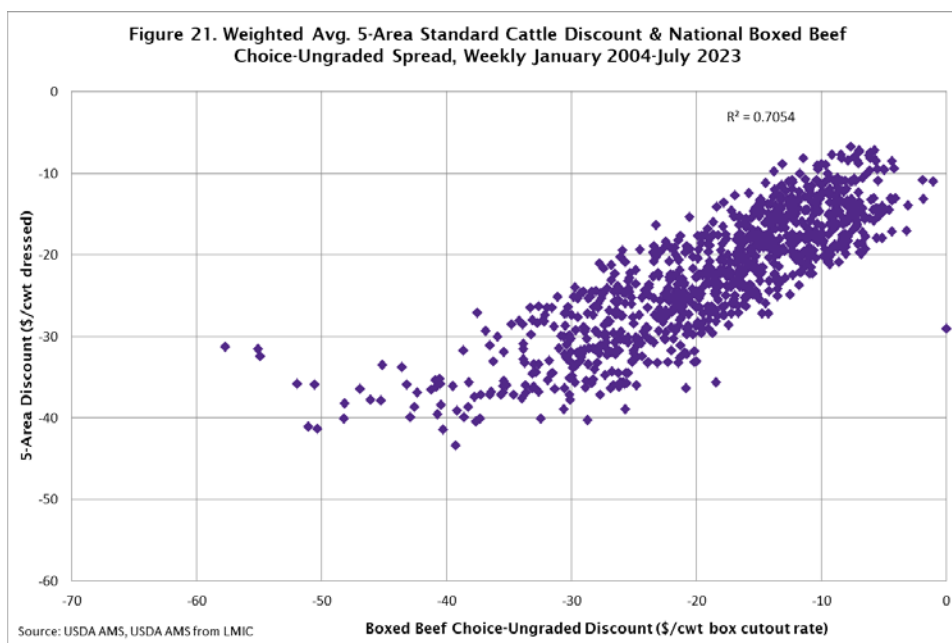


Figure 20 illustrates persistent seasonality in both the 5-Area Standard discounts and the Choice-Ungraded boxed beef price spread; however, discounts increase over time with discounts nearing  $-\$40/\text{cwt}$  in July 2023.





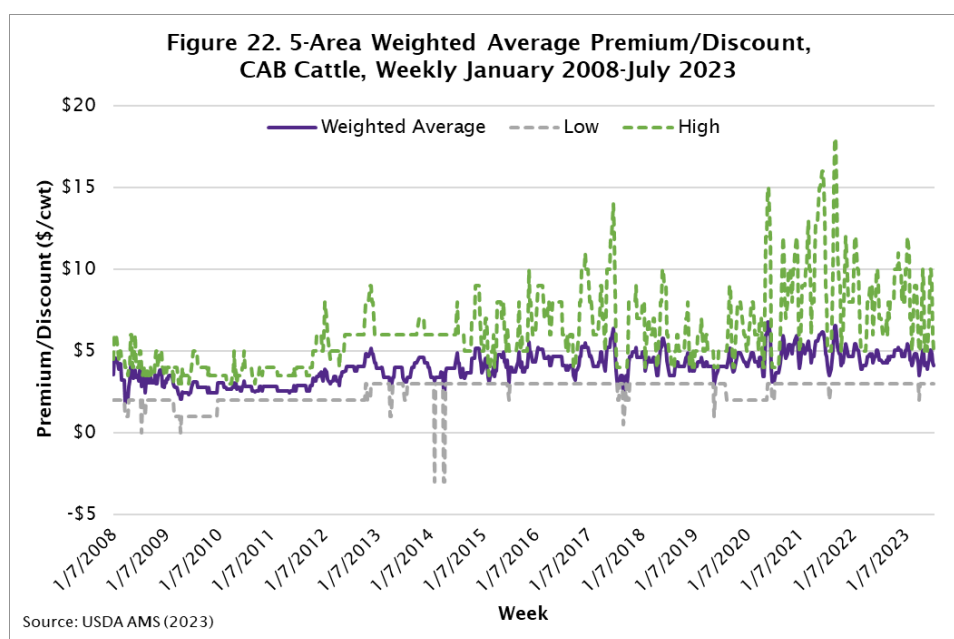
The relationship between the 5-Area Standard discounts and Choice-Ungraded spread is shown in Figure 21 where a strong positive correlation of 0.84 ( $R^2$  0.71) is observed.



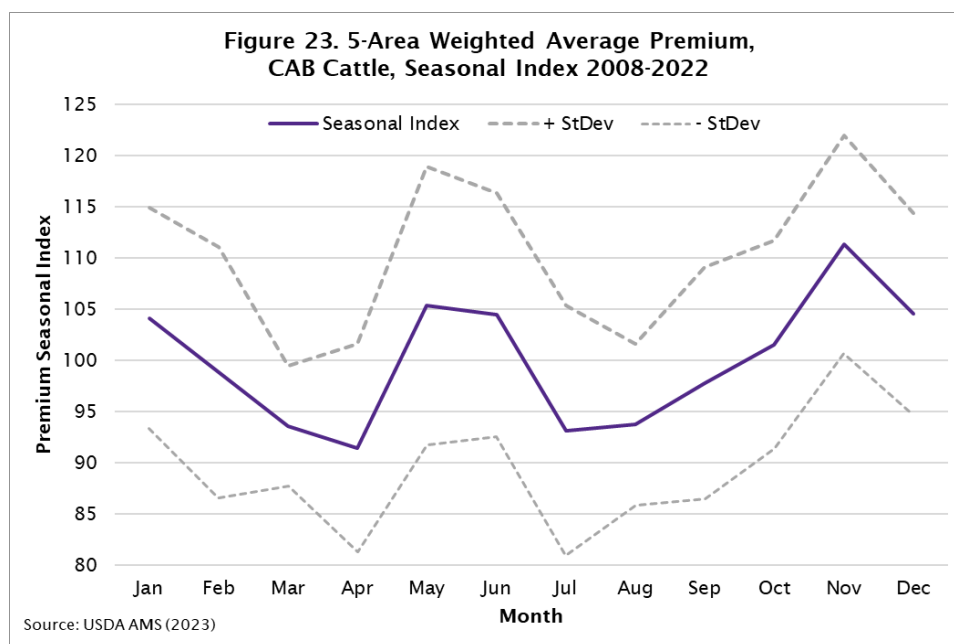
Increasing carcass weights has a positive impact on improving fed cattle quality causing widening distributions between premium cattle and discounted cattle which correlates with both the fed cattle market and the boxed beef market.

### Other Desirable Traits

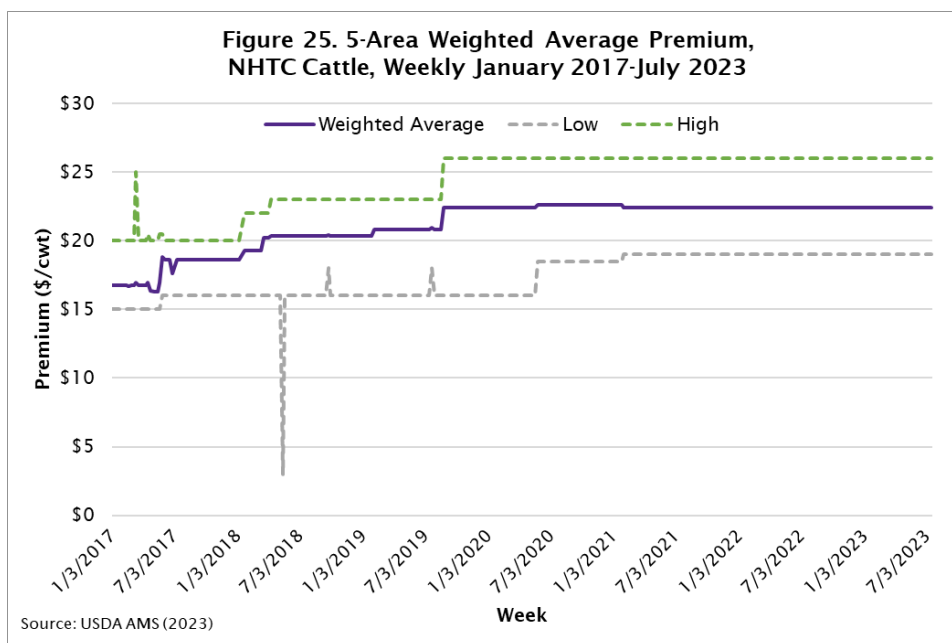
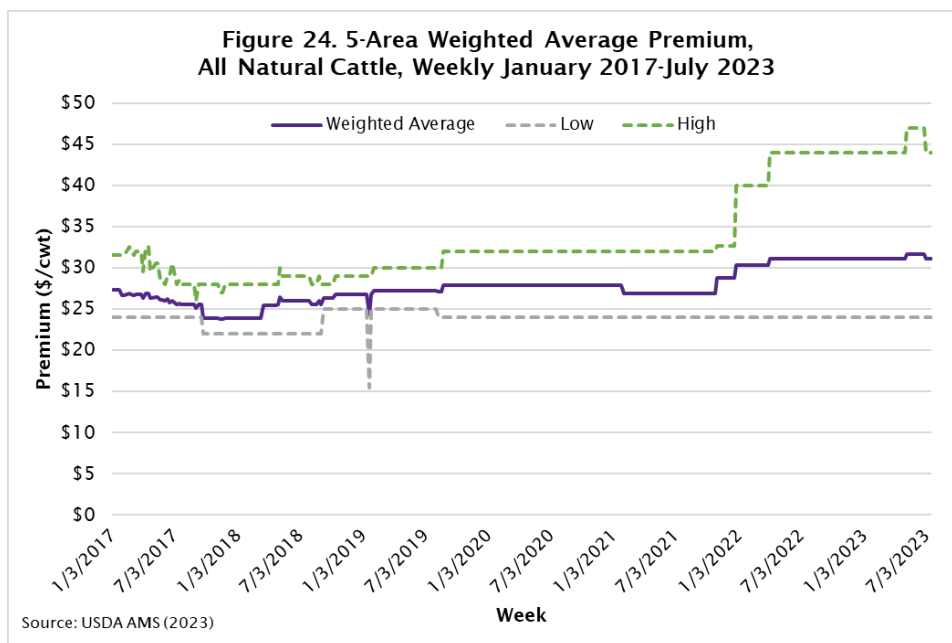
Premiums and discounts are also offered on a variety of other desirable traits. The USDA AMS began reporting premiums for cattle that qualify as Certified Angus Beef (CAB) in April 2007. Since 2008, the weighted average premium for 5-Area CAB cattle has remained steady averaging \$4/cwt; however, the “high” premiums continue to increase seeing values as high as \$18/cwt across grids in August 2021 (Figure 22).



Clearly, CAB premiums are worth searching across grids if a producer is targeting CAB carcasses. Figure 23 depicts the seasonal index of CAB premiums which follows a similar pattern to the seasonal indexes of Select and Standard discounts.



CAB premiums are highest in May and November and lowest in April and July with inconsistent patterns in deviations. Since August 2016, the USDA AMS has reported premiums on cattle categorized as All Natural and Non-Hormone Treated Cattle (NHTC). Producers are highly rewarded for cattle in these categories with weighted average 5-Area premiums trending above \$30/cwt for All Natural (Figure 24) and \$20/cwt for NHTC (Figure 25).



As consumer preferences continue shifting towards these traits, it is likely to see premiums remain steady with the potential to increase.



## CONCLUSION

In the evolving fed cattle markets, premiums and discounts for US fed cattle continue to adjust. Overall cattle and beef quality has seen dramatic improvement with increased use of AMAs by incentivizing high-quality products. Having knowledge of and adapting to changes in premiums and discounts is essential to producers who market cattle with grid pricing systems to minimize revenue loss from poor cattle quality while capitalizing on premium opportunities. Several carcass attributes illustrate strong seasonal patterns especially for quality grade differentials. Farm-level grid and wholesale carcass quality grade premiums and discounts on average are highly correlated week-to-week. This strong linkage sends clear signals to producers selling on a grid of quality incentives. However, also noteworthy is large variation, especially during some weeks, across grids for several carcass traits. Producers are strongly advised to monitor how their grid premiums and discounts compare with other grids and the weighted average as provided in USDA premium-discount reports.

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