

Agricultural Finance

Cattle Industry Outlook

Executive Summary

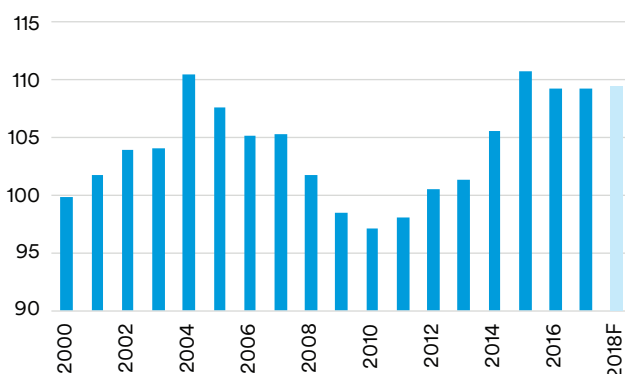
Spurred by strong demand and affordable feedstuffs, the U.S. beef sector has increased production 14% since 2015.¹ However, the industry's growth was not accompanied by a similar expansion in processing capacity. With no signs of plans to increase processing capacity in the near-term and an uncertain outlook for international trade, the cattle industry's four-year expansion could be nearing its peak.

Recovery in domestic beef demand overshadowed by growing global appetite

Growing domestic and export demand for U.S. beef has supported expansion in the industry. The Beef Demand Index² in Figure 1 compares domestic demand to levels observed in 2000. The index shows that domestic beef demand has rebounded following a sharp decline from 2004 to 2011. Disease outbreaks, the recession, and dietary concerns caused beef consumption to decline. However, in recent years, a strong economy and a shift in consumer preferences to protein rich diets has led to a recovery.

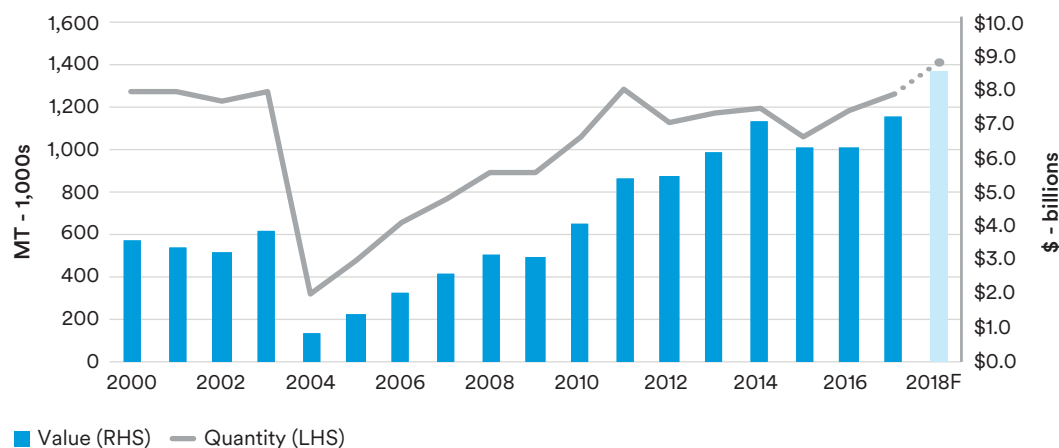
Exports have also played an important role in supporting the expansion. While domestic beef consumption has recently rebounded it has not kept pace with the increase in production. Higher exports have prevented a buildup in domestic supplies from weighing on prices. Figure 2 displays export volumes and values of U.S. beef since 2000. The significant decline in 2004 was caused by the discovery of mad cow disease in the U.S. cattle herd, which caused major export destinations to close their borders to U.S. beef. Since then, exports have recovered and are expected to surpass the 2003 record volume this year.

Figure 1 | Retail Beef Demand Index (2000 = 100)



Source: KSU, LMIC, MIM

Figure 2 | U.S. Exports: Beef & Beef Products



Source: USDA FAS, LMIC, MIM

Recent trade disputes may stymie U.S. beef sales abroad

The trend in beef exports over the last decade has been promising and represents a significant growth opportunity for a sector dealing with limited near-term upside in domestic demand. However, trade disputes and the renegotiation of many high profile free trade agreements (FTAs) could limit this growth moving forward. In 2017, China lifted its ban on U.S. beef only to place a tariff on it a year later.³ While export volumes to China were negligible in 2017, the country represents a significant growth opportunity. Furthermore, the U.S. withdrawal from the Trans Pacific Partnership (TPP) may diminish its trade to two of its largest beef export

markets, Japan and South Korea. As part of the agreement, tariffs on beef from other TPP member nations will be slowly reduced over the next two decades. This provision will give Australia, a TPP member and U.S. beef rival, a competitive advantage in those markets.

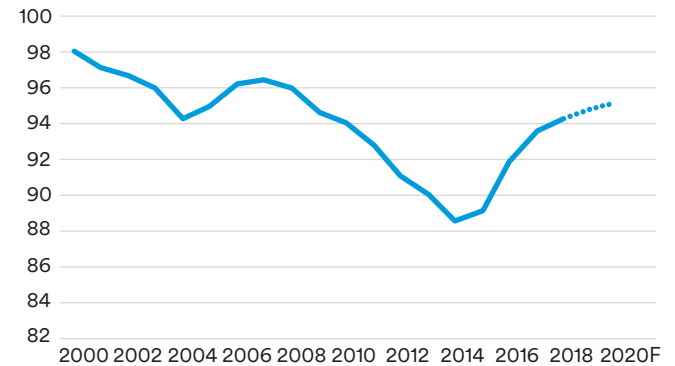
Packing plants continue to capitalize on the U.S. cattle industry expansion

The U.S. cattle herd entered its fourth consecutive year of expansion in 2018. The sector is highly cyclical, generally consisting of one peak and one trough in cattle inventories per decade. As shown in Figure 3, cattle inventories have grown since 2014, following seven previous years of contraction. The decline was caused by a myriad of factors including decreasing demand and a drought in the Southern Plains. Droughts in the Southern Plains can have an amplified effect on the cattle industry, because nearly one-third of the national beef herd is in this region.

Cattle supply chains are characterized by different, independent segments of production, and fluctuations in cattle inventories affect each segment differently. Cattle ranchers sell feeder cattle to feedlots, feedlots market fed cattle to meat packers, and meat packers market boxed beef to retailers. As farmers expand their herds, a greater supply of animals enter the system and allow downstream segments, like packers and retailers, to capture a larger share of every retail dollar. The opposite tends to occur during periods of declining animal numbers. As cattle inventories fell between 2007 and 2014, participants at each stage of the supply chain bid against each other for a declining number of cattle. This reduced profitability for meat packers and retailers, and as shown in Figure 4, led to shuttered processing capacity.

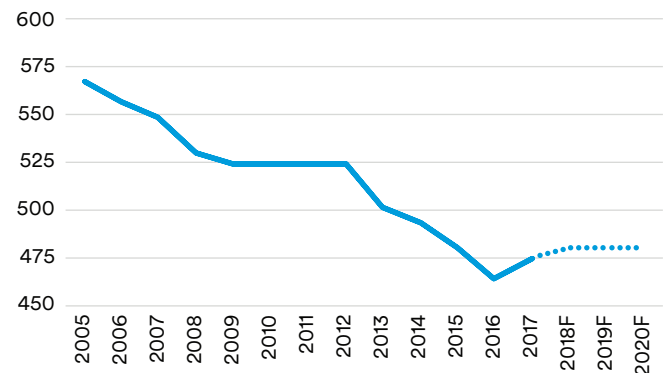
Since 2015, improving pasture conditions in the Southern Plains along with declining feed prices have spurred a 14% increase in U.S. beef production. However, the growth in production has not been accompanied by an expansion in processing capacity, causing a bottleneck in the supply chain. As shown in Figure 5, beef processors have instead opted to operate above full capacity since 2017 by increasing Saturday processing hours. Saturday processing volumes have increased significantly in the past three years, rising from 9% of the average daily processing capacity in 2015 to 38% in 2018.⁴ While there is room to further increase Saturday processing hours, sourcing labor to work weekend shifts in today's historically tight labor market requires premium wages.

Figure 3 | U.S. Cattle Inventories (Million Head)



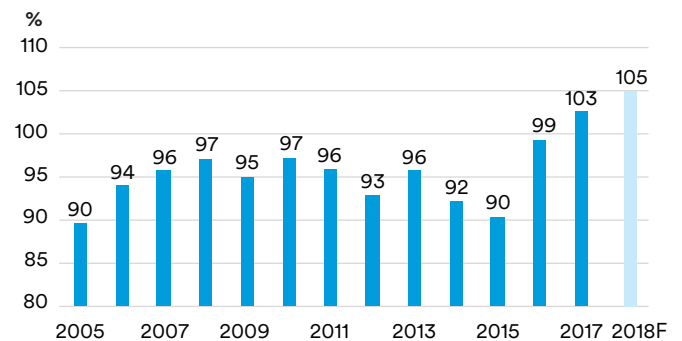
Source: USDA, CattleFax

Figure 4 | U.S. Packing Capacity (Fed Steer/Heifer Weekly Average)



Source: CattleFax

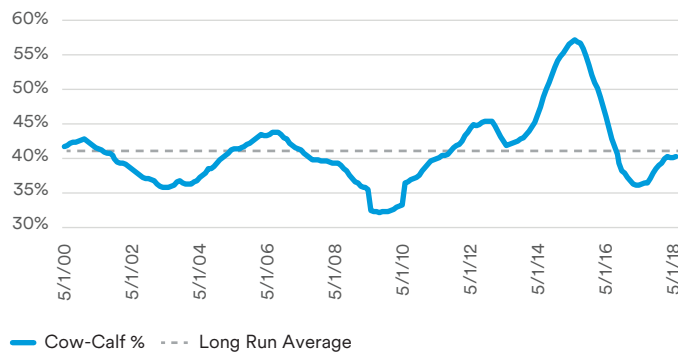
Figure 5 | Steer/Heifer Slaughter (% of Capacity)



Source: CattleFax, LMIC, MIM

The bottleneck at the processing level has allowed packing plants to demand a larger than average proportion of beef's retail value. In 2017, U.S. consumers spent approximately \$105 billion on beef purchases.⁵ Figures 6-9 graph the share of total retail dollars that each segment of the beef supply chain has captured through time.⁶ As mentioned above, the contraction of U.S. cattle inventories between 2007 and 2014 reduced cow-calf producer's share as cattle herds were liquidated and large volumes of meat were sent to market. This dynamic flipped in 2014, as feedlots and packers scrambled to source cattle from a smaller domestic herd. This led to record cow-calf profits and forced some feedlots and packers out of business.

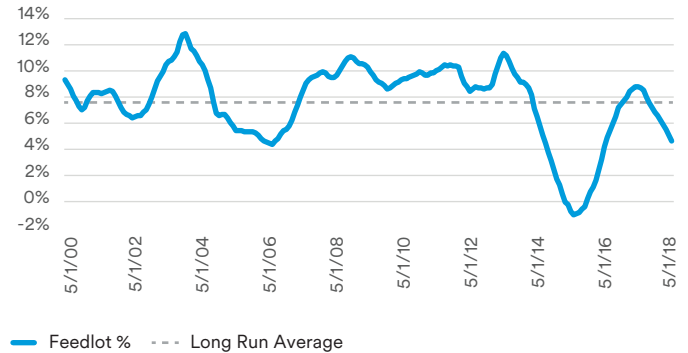
Figure 6 | Cow - Calf Producers



Cow-calf: These operations maintain a breeding herd and sell calves and feeder cattle.

Source: USDA, LMIC, MIM

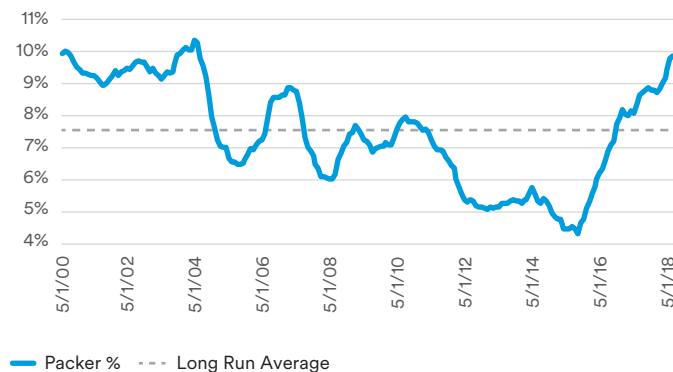
Figure 7 | Feedlot Operator



Feedlots: Feedlots primarily purchase calves and feeder cattle from cow-calf operations and raise them to a standardized weight.

Source: USDA, LMIC, MIM

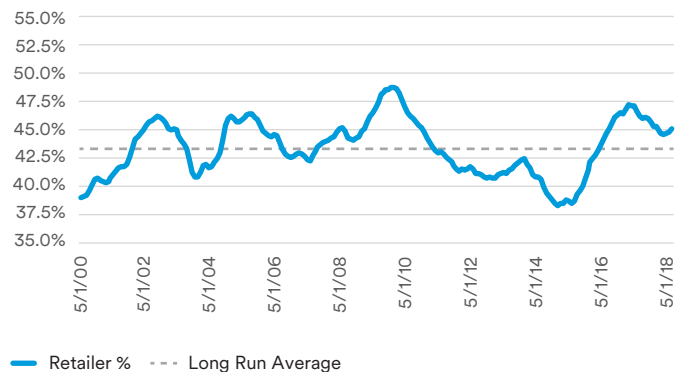
Figure 8 | Packing Facility Operator



Packers: Once cattle reach a desired weight in feedlots, they are sold to packers to be processed into boxed beef.

Source: USDA, LMIC, MIM

Figure 8 | Retailers



Retailers: Retailers purchase boxed beef from packers and distribute to consumers.

Source: USDA, LMIC, MIM

Figures 6-9: Percentage of retail dollars per pound of beef, 52 - week rolling average

In 2018, the playing field has tilted in favor of beef packers who continue to capture an increasing proportion of retail dollars spent on beef, largely at the expense of feedlots. Packers have increased Saturday hours in 2018 to process the growing pipeline of fed cattle, but only once have fed cattle prices declined, which increased processing margins. More importantly, there are no new large packing plants being constructed or major renovations scheduled to be completed soon. This implies that as the domestic cattle herd continues to grow through 2020, feedlots may begin trying to claw back a portion of retail dollars through lower prices bid for feeder cattle. As cow-calf producer margins come under pressure, heifer retention rates will likely decline, causing an eventual inflexion point in cattle herd expansion.

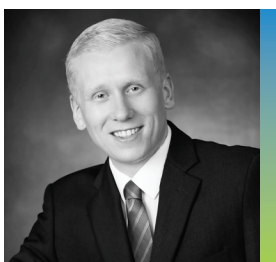
Endnotes

- ¹ Livestock Marketing Information Center, August 7, 2018.
- ² Glynn Tonsor, Kansas State University, 2018. Estimates strength of beef demand by comparing beef consumption and retail prices and how they influence each other through time. Value for 2018 is MIM internal estimate.
- ³ USDA Global Agricultural Information Network Report, June 21, 2018.
- ⁴ Calculated using data from the USDA Daily Steer and Heifer Slaughter Cattle Summary and processing capacity estimates as calculated by CattleFax, August 8, 2018.
- ⁵ Calculated using USDA all-fresh retail beef prices and USDA consumption estimates, August 7, 2018.
- ⁶ Calculated using stated USDA monthly prices for Kansas feeder and fed cattle and wholesale and retail beef, as reported by LMIC.

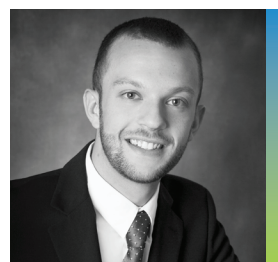
Authors



ERIC RAMA, CFA
Head of Agricultural Research



BLAINE NELSON
*Associate
Agricultural Research*



TOM KARMEL
*Associate
Agricultural Research*

About MetLife's Agricultural Finance Group

MetLife's Agricultural Finance Group ranks among the most active private agricultural, agribusiness and timberland mortgage lenders in North America, with a total agricultural mortgage portfolio of \$15.5 billion.* We specialize in providing fixed and variable rate mortgage financing for a full range of capital needs.

Whether you're looking to re-amortize your term debt, expand your operation or refinance an existing mortgage, MetLife can tailor a loan to fit your needs. Our regional network keeps us close to our markets and better positioned to serve your immediate and long-term mortgage financing needs.

For more information, please visit us at www.metlife.com/ag.

*Includes MetLife general account assets and assets managed on behalf of unaffiliated/third party clients as of 03/31/18.

All information contained herein has been obtained by MetLife from sources believed by it to be reliable. The analysis, opinions, forecasts and predictions contained herein are believed by MetLife to be as accurate as the data and methodologies will permit. However, MetLife makes no representations or warranties, either expressed or implied, to any persons as to the completeness, accuracy and reliability of such information, forecast and/or predictions and expressly disclaims any liability with respect to any of the foregoing.