



# Market Advisor

by **Tim Petry**, North Dakota State University Extension Service

## Is it time to revisit the cattle cycle?

*For many years cattle producers experienced a somewhat predictable 10-year cattle cycle. However, during the last 15 years an abnormal number of outside events has caused the cycle to be less predictable and left producers wondering if the cattle cycle is relevant for planning purposes. The likely answer to that is yes, with particular emphasis on the next several years.*

### Potential of return

There are actually three components to a cycle — the cattle inventory cycle, the beef production cycle and the cattle price cycle.

Cattle inventory cycles experience periods of increasing numbers called accumulation phases and periods of decreasing numbers called liquidation phases.

Beef production cycles lag inventory cycles by about one year, because to liquidate numbers more cattle must be slaughtered, and to accumulate numbers, fewer cattle are slaughtered. Price cycles are typified by periods of increasing prices called increasing phases and decreasing prices called decreasing phases.

Cattle price cycles tend to be opposite of beef production cycles. The two factors that

most affect the length of cattle cycles are the reproductive biology of cattle and weather. Cattle inventory cycles typically experience six- to eight-year accumulation phases and three- to four-year liquidation phases. So, a typical cycle would be about 10 years in length. The accumulation phases are longer because of the relatively long time compared to other livestock species that it takes to rebuild herds.

A heifer calf retained in the fall for breeding purposes will be bred the following summer, have a calf the next spring and that calf will not reach slaughter weight and be reflected in the market as beef production until the following year. Since this reproductive biology cannot be changed given current technology, cattle cycles will

likely continue to occur, but they will be much more affected by worldwide economic conditions, political conditions and meat trade issues than in the past.

### The unpredictable

What happened to the cycle the last 15 years? A whole host of unexpected and unpredictable events plagued the beef industry and caused cattle producers to manage from one event to the next. From 2000 to 2008 severe drought occurred in major cattle-producing areas of the United States, including North Dakota, where I am.

Drought surfaced again in 2010 in the Southern Plains and continued to intensify and spread. By 2012 much of the United States was experiencing drought conditions. That led to record-high corn prices, very poor pasture and range conditions, and continued beef herd liquidation in spite of record-high prices for cattle.

Add to that many unforeseen beef demand shocks, beginning with the terrorist attacks on 9-11-2001, then the late December 2003 and subsequent bovine spongiform encephalopathy (BSE) cases,



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## MARKET ADVISOR

and the 2008-2009 financial crisis causing the worst recession since the 1930s. Competing livestock disease issues such as the unfortunate misnaming of the H1N1 virus as the swine flu in 2009, the porcine epidemic diarrhea virus (PEDv) in 2014, and avian influenza disrupted production patterns and world trade.

Federal government policies also affected the cattle industry, including the *Energy Policy Act of 2005*, which mandated a renewable fuel standard and caused a rapid increase in the use of corn for producing ethanol with increasing and volatile corn prices.

The global market and issues related to U.S. beef and byproduct exports are also adding to cattle price volatility. International trade policies, weather and catastrophic events around the world quickly reverberate to prices paid for calves at auction markets throughout the United States.

### Is it relevant?

Back to the original comment at the beginning on the relevance of the cycle for planning purposes. After eight straight years of declining U.S. beef cow numbers, an increase finally occurred in 2014. For more detailed information see the April 2015 *Angus Journal's* "Market Advisor" column titled, "Beef herd rebuilding question is answered." That column documented that beef herd rebuilding has started in the United States.



The number of beef cows on Jan. 1, 2015, at 29.7 million head, was up 2.1% from 29.1 million head in 2014. The number of beef replacement heifers, at 5.8 million, increased more than 4% from 2014. Furthermore, the number of heifers expected to calve in 2015, at 3.5 million head, was up more than 7% from the 3.3 million in 2014.

Prices for all market classes of cattle were record high in 2014 and likely reached the cyclical high for this cattle cycle. Prices were bolstered by the historical short cattle and beef supply coupled with beef herd building that caused more heifers to be kept for breeding purposes and low beef cow slaughter. Furthermore, lower-than-expected pork and chicken production and strong export demand for beef and byproducts aided the record-high cyclical peak in prices.

A number of headwinds have developed in 2015 that could cause cattle prices to decline cyclically for the next several years. USDA is predicting beef production to increase in 2016 and subsequent years. Furthermore, record pork, chicken and total meat production already has occurred in 2015 and is predicted to occur again in 2016.

Another key driver behind calf and yearling prices in recent years has been declining feed costs, a trend that has largely run its course. U.S. pasture and range conditions in 2015 are the best they have been in 20 years with the exception being states west of the Continental Divide. Generally good moisture conditions should cause continued herd rebuilding, but will also be the wild card for how much and where the herd will increase.

During the increasing phase of the cattle price cycle (2010-2014), prepricing tools in risk management strategies for cattle to be sold in the future are usually less effective. That has been the case the last several years, especially for producers selling calves and yearlings. During the decreasing phase of the price cycle, those strategies tend to work better. Of course, seasonal price patterns are very important in developing marketing plans.

The worldwide market environment that the entire livestock industry now operates in will likely continue to cause more price volatility than in past cycles.

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**Editor's Note:** *Tim Petry is a livestock marketing economist with the North Dakota State University Extension Service.*