## **MARKET** ADVISOR

by Tim Petry, North Dakota State University Extension Service

## Black Swans Cause Cattle Price Volatility

Unpredictable events can cause extreme results in the market.

Cattle prices have been very volatile in the last several years. Most livestock marketing textbooks identify four important livestock price patterns — long term, cyclical, seasonal and irregular.

Most of my columns focus on seasonal and cyclical price patterns because they are important for developing marketing plans. However, when irregular patterns occur, they get emphasis because reevaluating marketing plans may be necessary.

Past examples of irregular price patterns that caused abrupt cattle price declines followed by varying lengths of subsequent rebounds are the events of the 9-11-2001 terrorist attacks and the 2003 discovery of bovine spongiform encephalopathy (BSE) in a U.S. cow.

A 2002 quote by Donald Rumsfeld, then U.S. Secretary of Defense, when holding a news briefing about the possibility of Iraq having weapons of mass destruction, sums up what has

happened to cattle prices.

He stated, "There are known knowns; there are things we

know we know. We also know there are known unknowns; that is to say we know there are some things we do not know. But there are also unknown unknowns — the ones we don't know we don't know."

Rumsfeld's "unknown unknowns" could be classified in the irregular cattle price pattern category. Those events have lately also been called black swan events. Black swan events are defined as an unpredictable event typically with extreme results.

Current knowns and unknowns

> An example of a known known is that the U.S. beef cow herd has declined for

> > two straight years - 2019 and 2020. Drought developed in many Western states in 2020

and expanded into the Northern Plains in 2021, with forced beef cow liquidation. Higher beef cow slaughter in the first half of 2021 is expected to continue, and will result

> in the beef cow herd declining again in 2021. Declining beef cow numbers will be supportive to cattle prices in the next

several years.

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as an unpredictable event

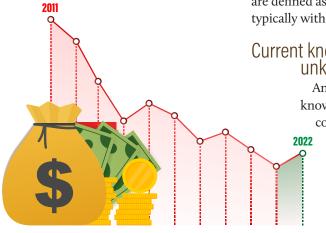
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An example of a known unknown is the 2020-2021 corn price rally due at least in part to strong demand from China. July 2021 corn futures prices were more than \$7 per bushel (bu.) in May. One year ago the July 2021 contract traded at \$3.25. I doubt if many expected prices to now be that high back then.

We know corn prices will continue to be volatile as information on the number of planted acres, crop development and expected yields, along with the dynamic export market, affect prices.

Volatile corn prices will affect calf and feeder cattle prices. Remember the adage "a 10 cent per bushel change in corn prices will cause a \$1 per hundredweight (cwt.) change in fall calf prices in the opposite direction."

The last couple years have seen



a number of "unknown unknown" black swan events that caused seemingly endless cattle price volatility. Markets do not like uncertainty and tend to respond abruptly and sometimes too much.

2020 began with expectations for improving cattle prices as the beef cow herd declined. The U.S. economy was robust with low unemployment, and ratifying trade agreements with our top four beef customers caused record beef exports.

But the most catastrophic black swan event to happen in some time, the COVID-19 pandemic, started in early 2020 and quickly spread throughout the world, including the United States. The domestic and world beef markets were severely disrupted as stay-at-home and social-distancing orders were put in place. The worst negative cattle price effect occurred in 2020, but lingering effects are still affecting cattle and beef markets.

Other recent black swan events that were less catastrophic but caused uncertainty, and at least temporarily negatively affected cattle prices, were the Tyson packing plant fire in August 2019, the Southern Plains winter storm Uri in February, and the recent foreign cyberattack hacking of JBS, a major world meat packer.

Expectations are again for cyclically increasing cattle prices. Lower beef cow numbers will cause lower beef

production, COVID-19 vaccinations are resulting in a return to normalcy and beef exports are again at record levels. 2022 live cattle futures prices are all over \$130, with the April contract over \$137. Those would be the highest fed cattle prices since 2017. We can only hope for the black swans to stay away!

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

