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The Impacts of Drought on New Mexico's Beef Industry

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New Mexico Legislature Water and Natural Resources Committee
Corona Range and Livestock Research Center
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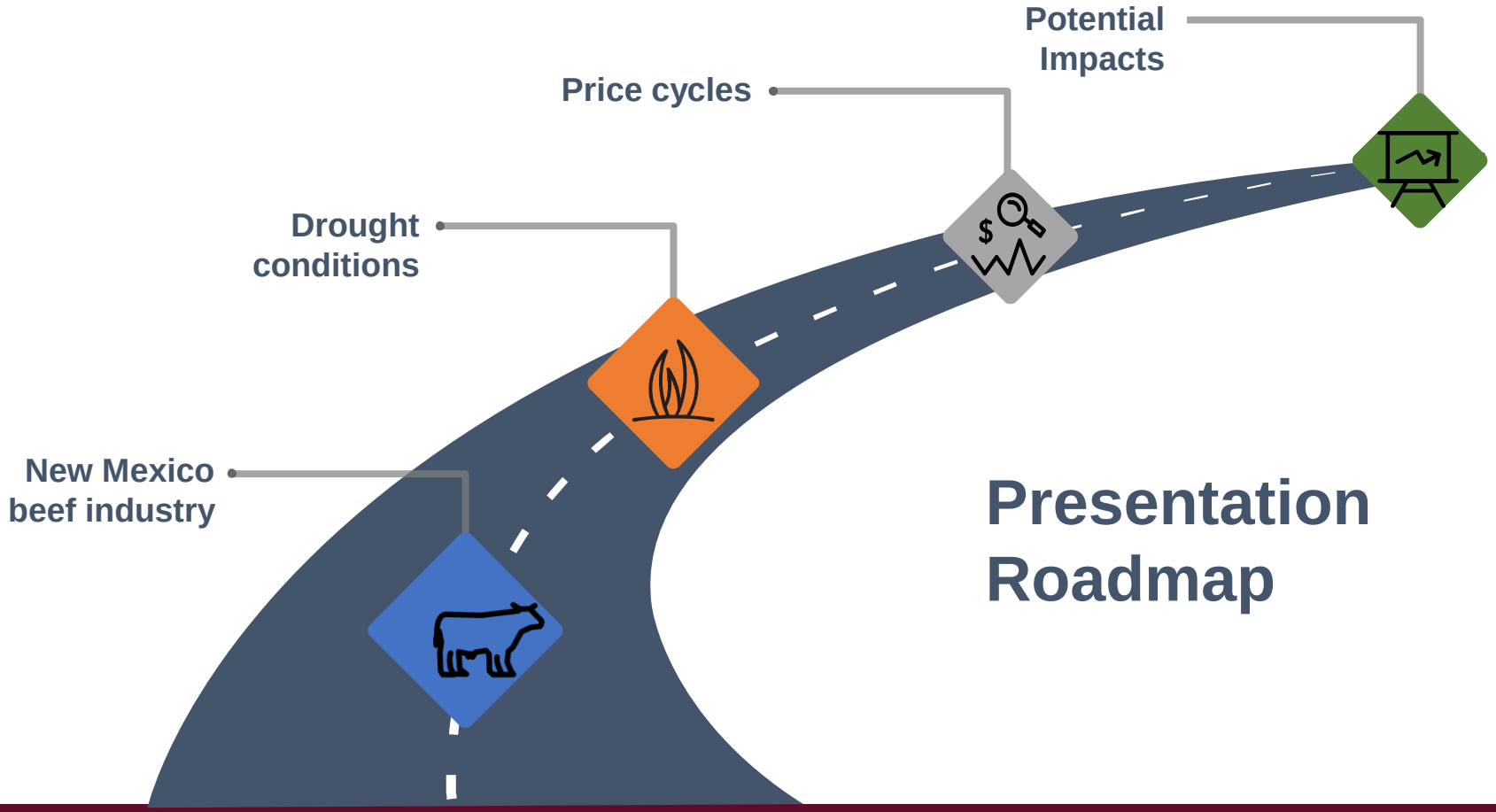
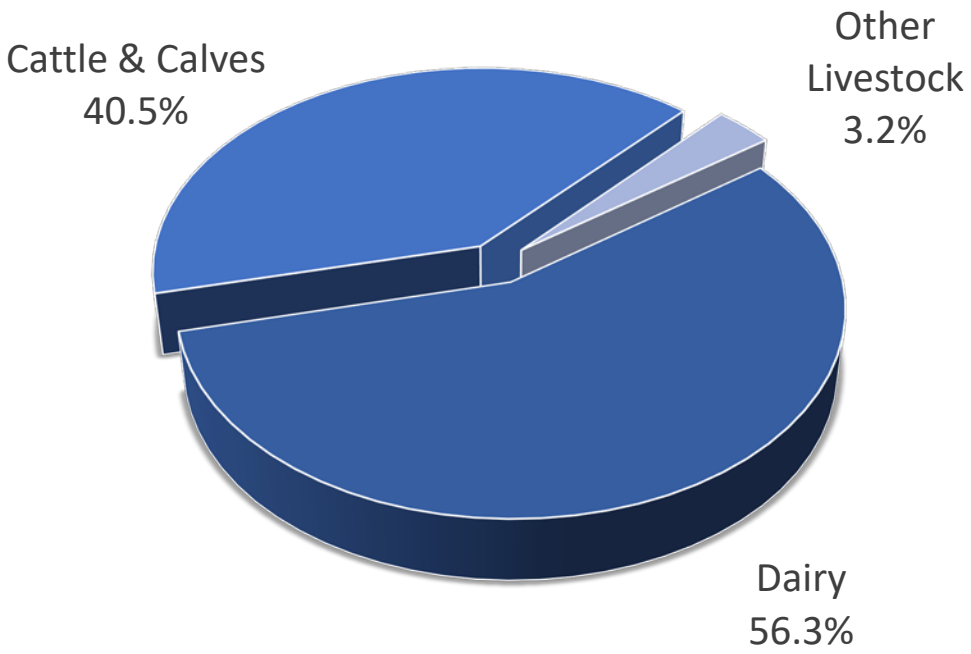


Presentation Roadmap

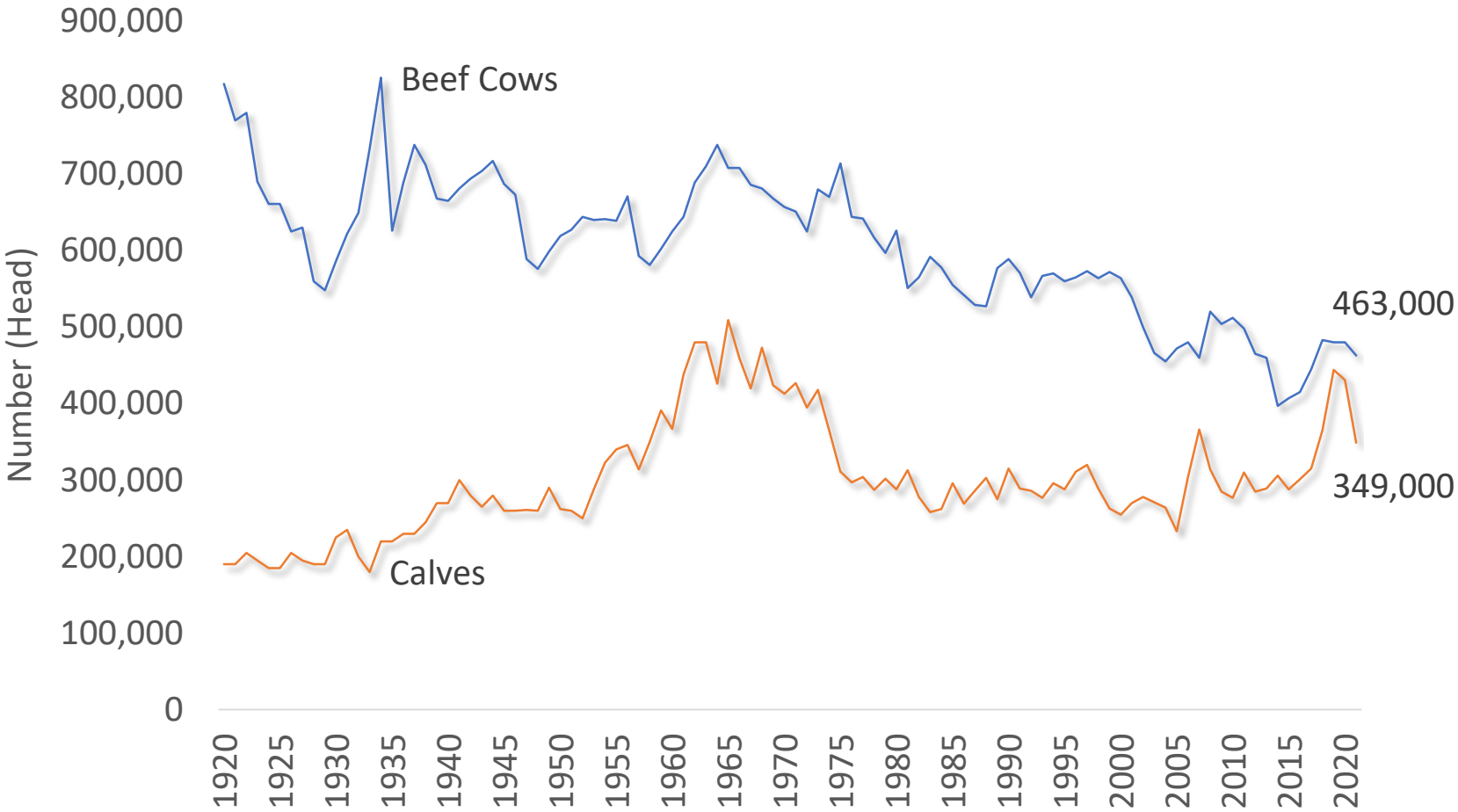
New Mexico Agriculture

- $3.2 billion cash receipts in 2019
  - $2.5 billion livestock products (77.2%)
  - $0.7 billion crops (22.9%)



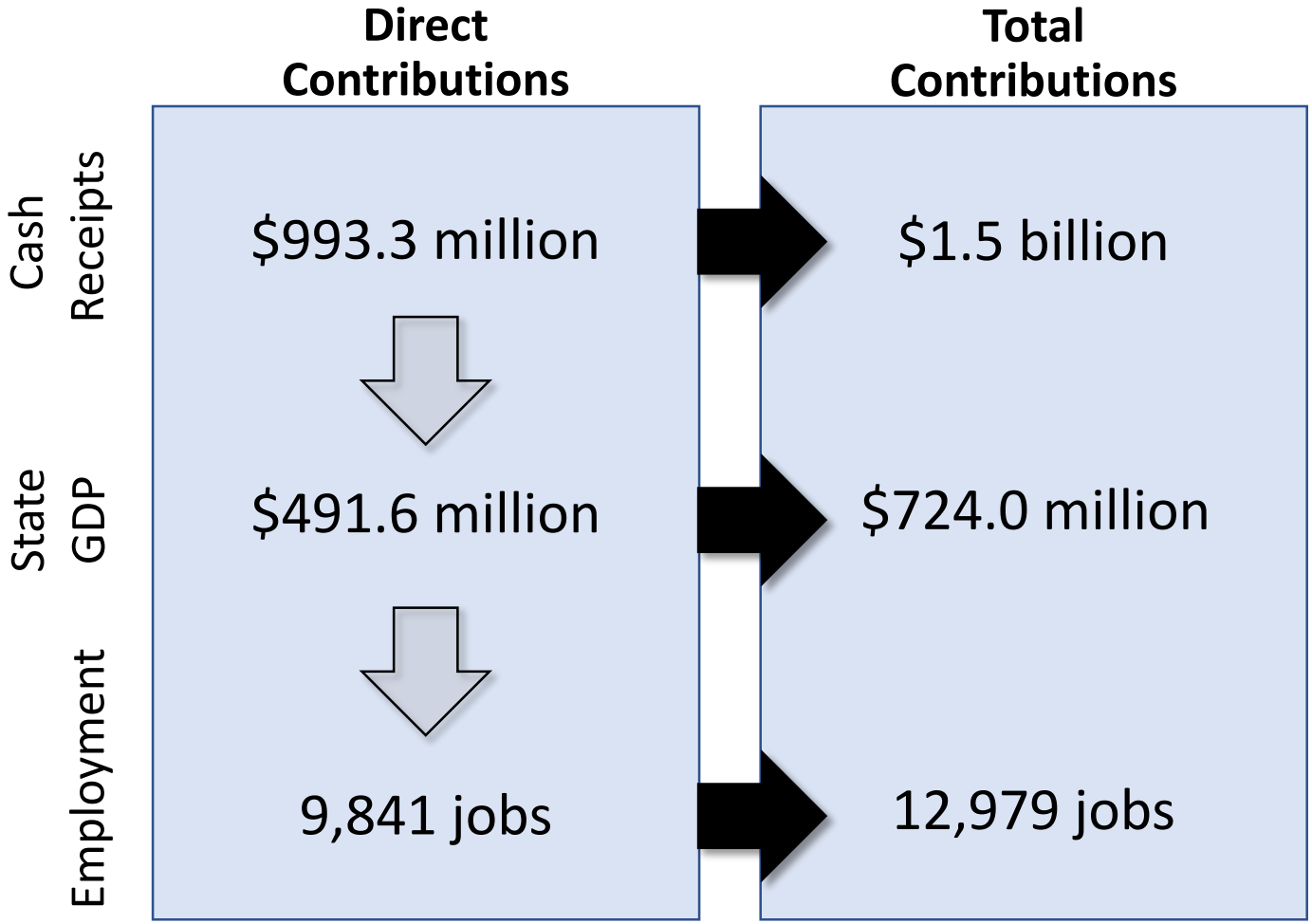
Source: USDA – NASS 2019 NM Agricultural statistics

New Mexico beef cattle inventory

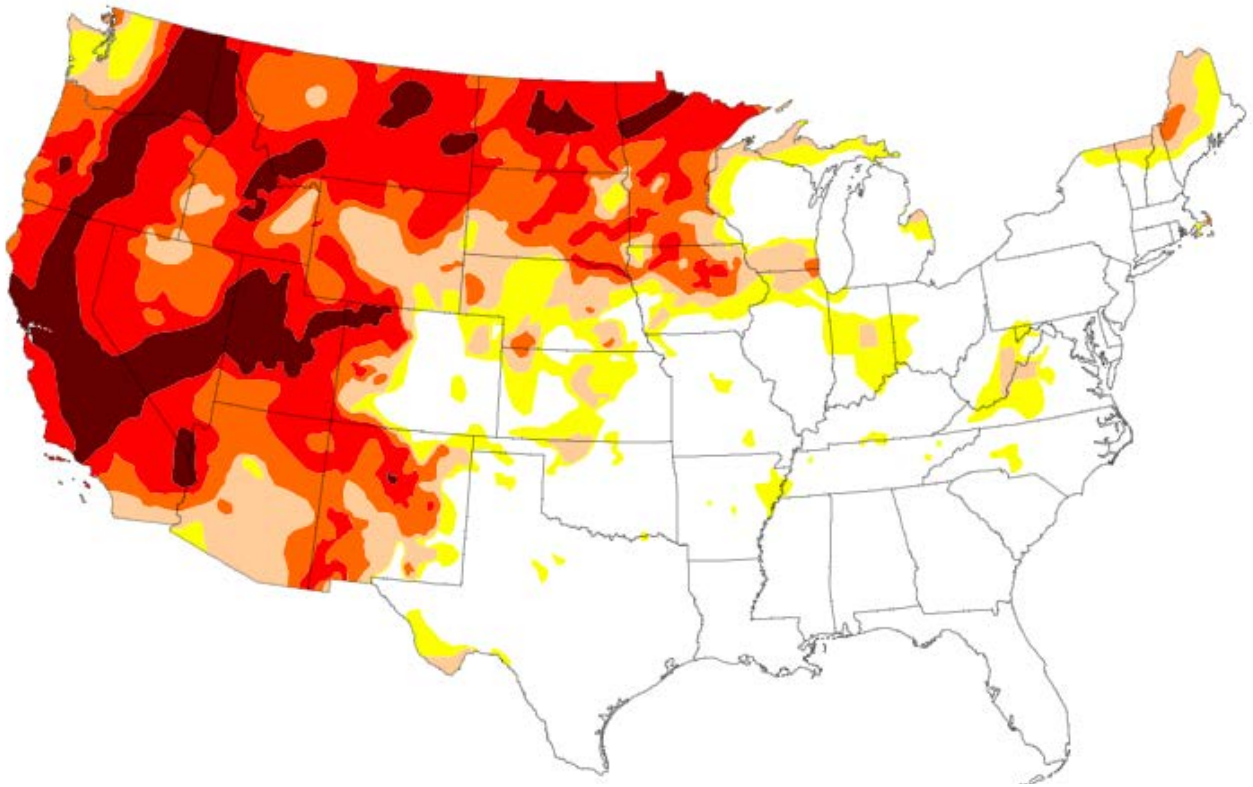


Source: USDA – NASS Quick Stats

Economic importance of beef cattle (2019)

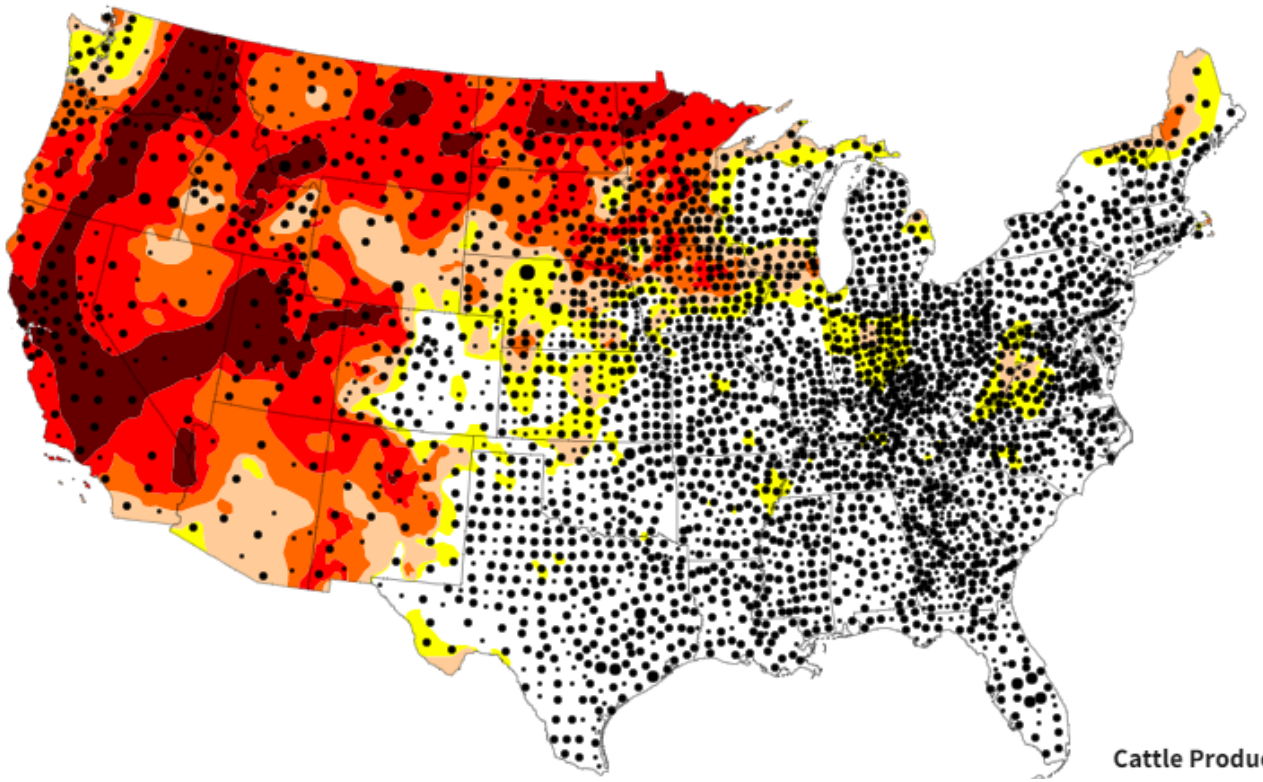


U.S. Drought Monitor: Current Drought



Source: https://www.drought.gov/current-conditions

U.S. Drought Monitor: Current Drought



Cattle Produced by County

Scales by Inventory

U.S. Drought Monitor

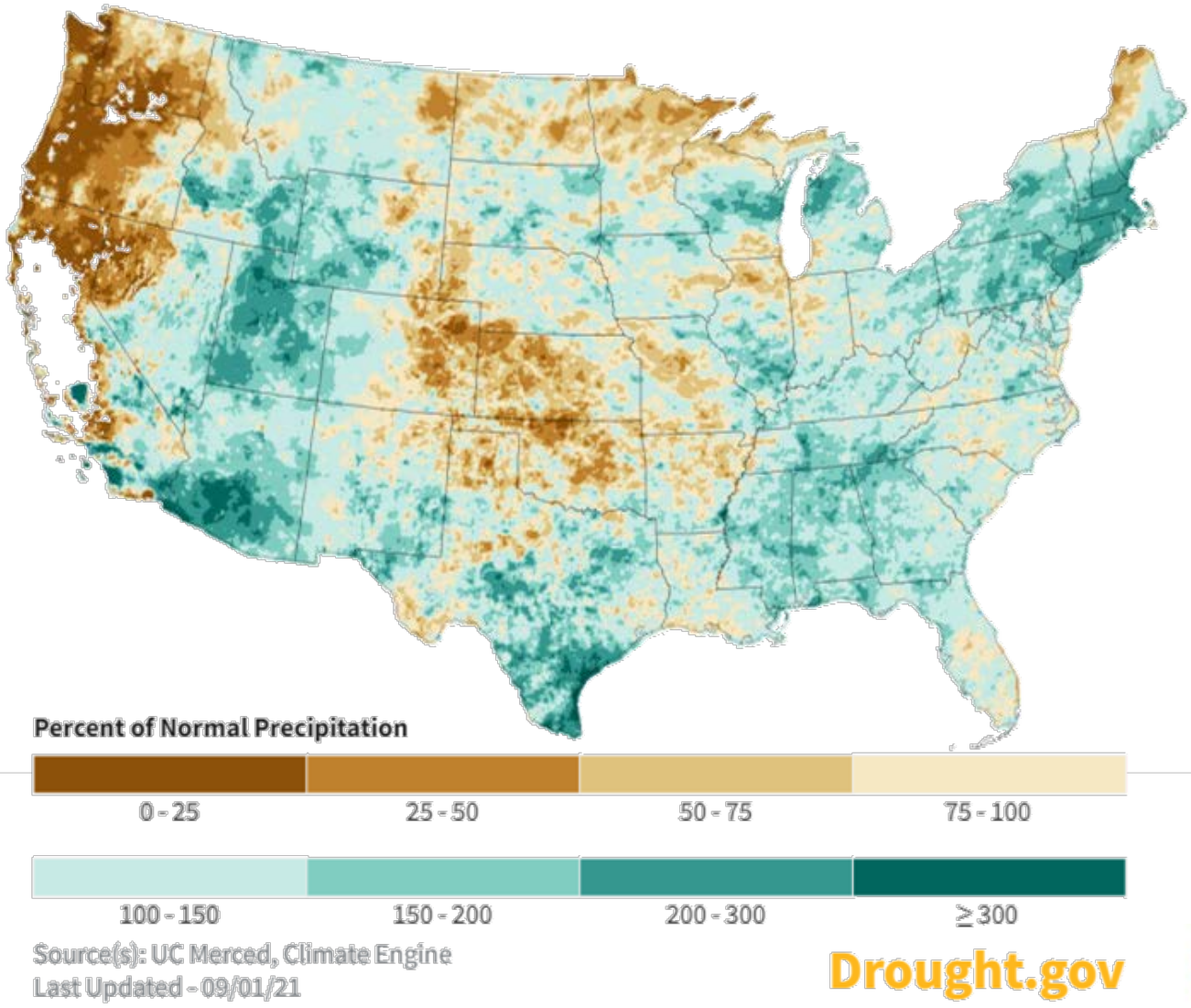
(D0) Abnormally Dry | (D1) Moderate Drought | (D2) Severe Drought | (D3) Extreme Drought | (D4) Exceptional Drought

Source(s): USDA NASS, U.S. Drought Monitor
USDM Updates Weekly - 08/24/21

Drought.gov

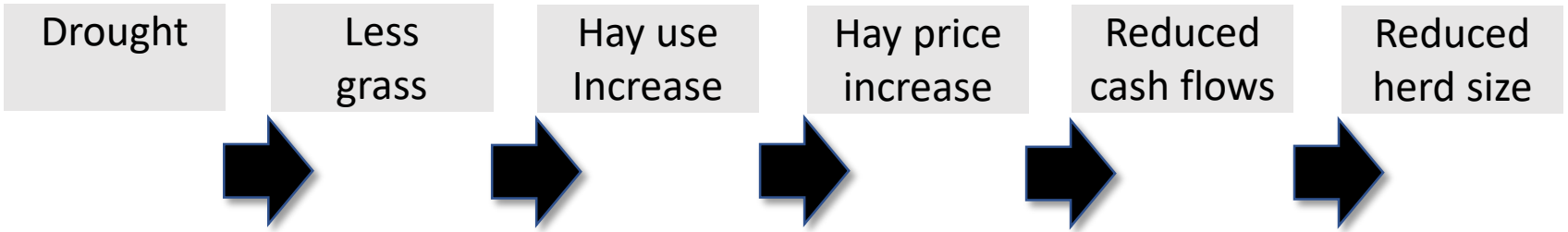
Source: https://www.drought.gov/sectors/agriculture

Precipitation Conditions: 60-Day % of Normal

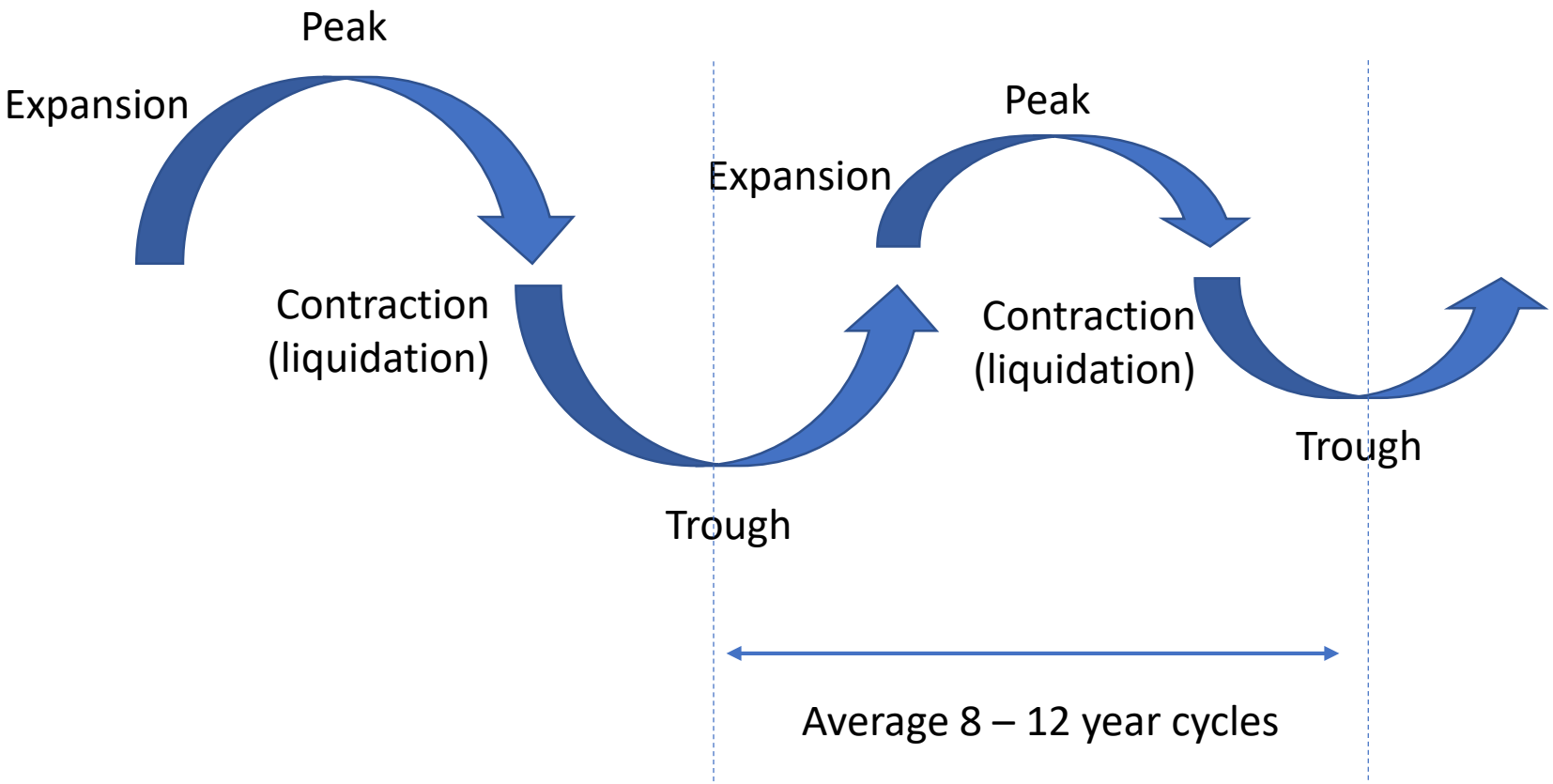


Source: https://www.drought.gov/sectors/agriculture

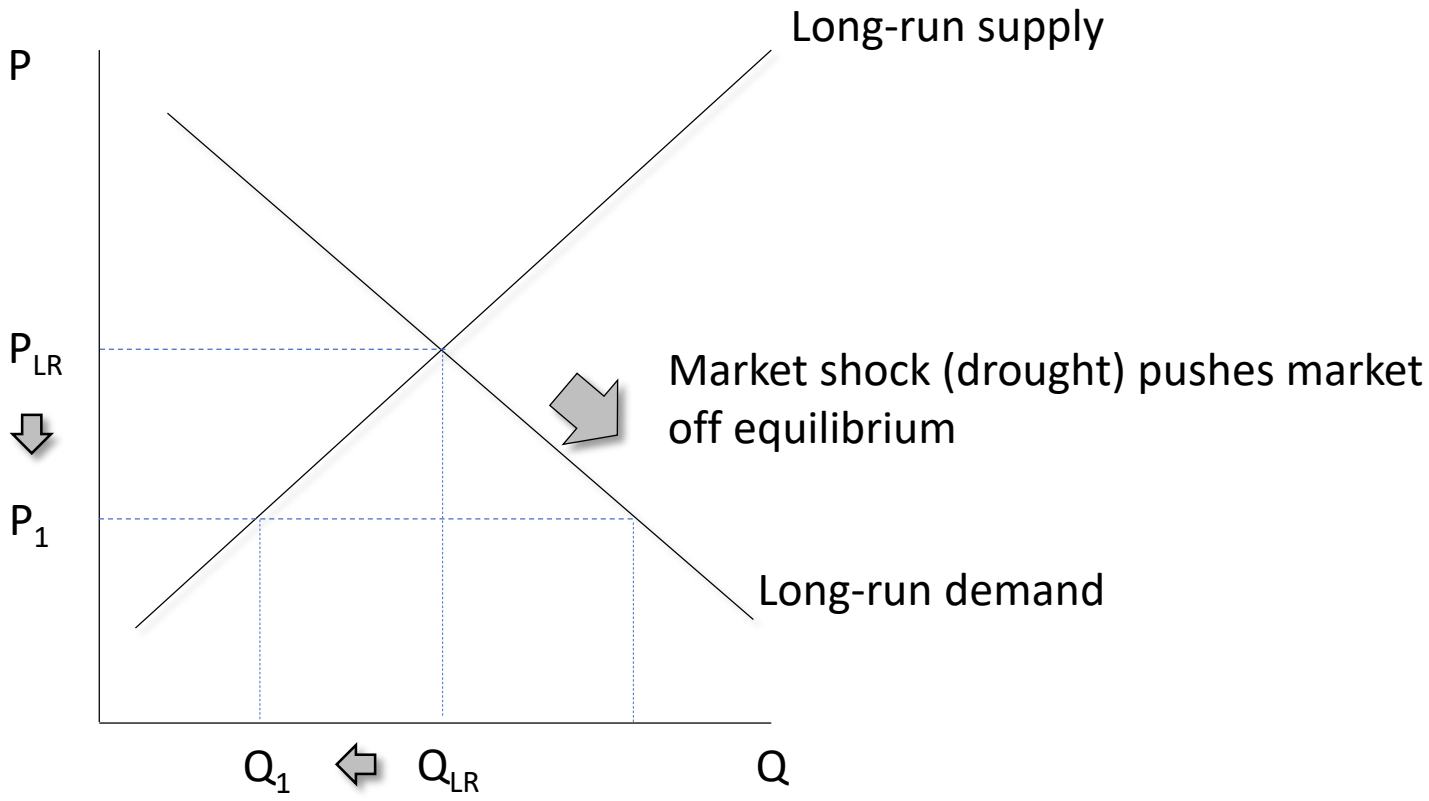
Cattle cycles driven by drought



Cattle cycles



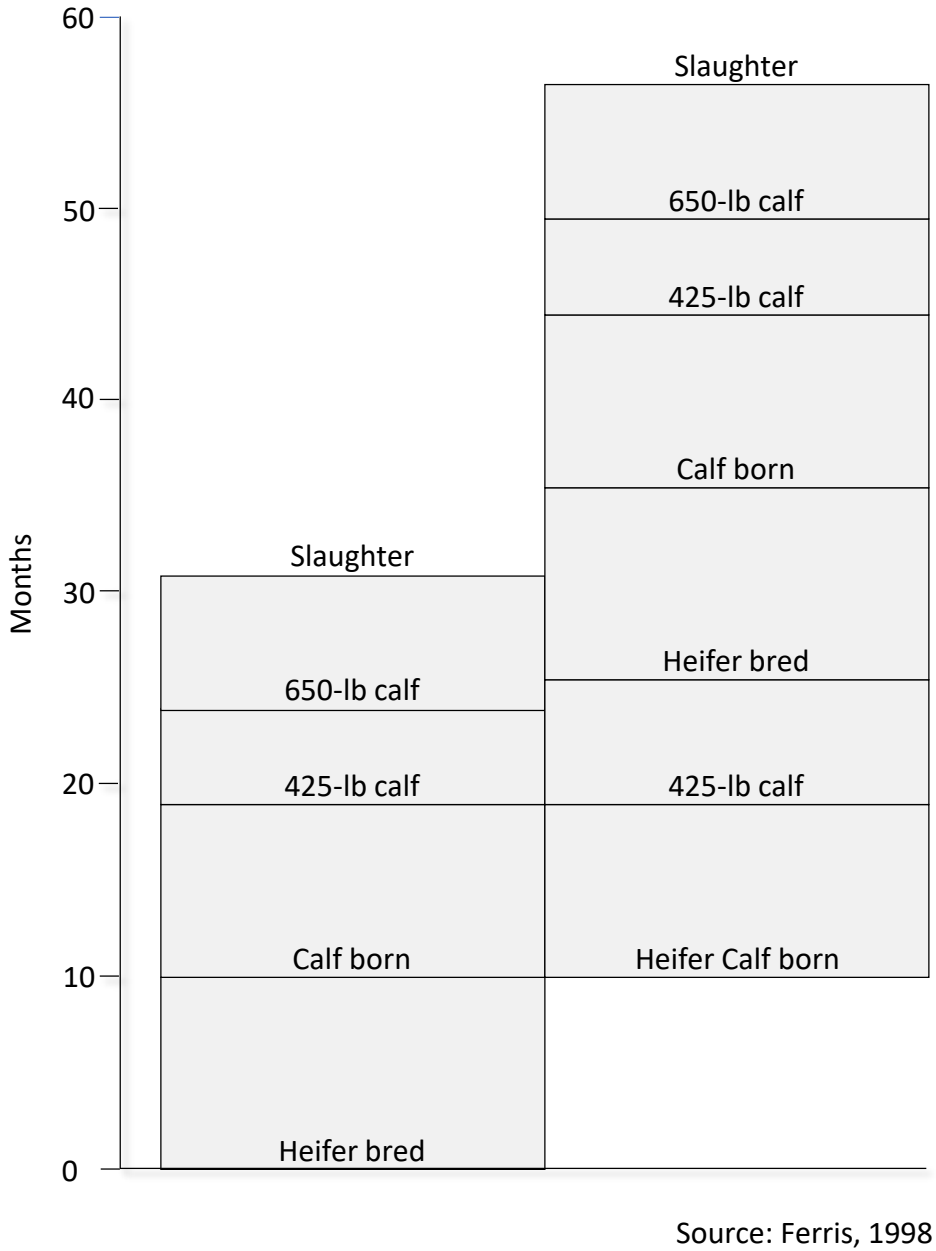
Cattle cycles



Increased quantities in the market drive prices down

Quantity of meat in the market increases as herds are liquidated

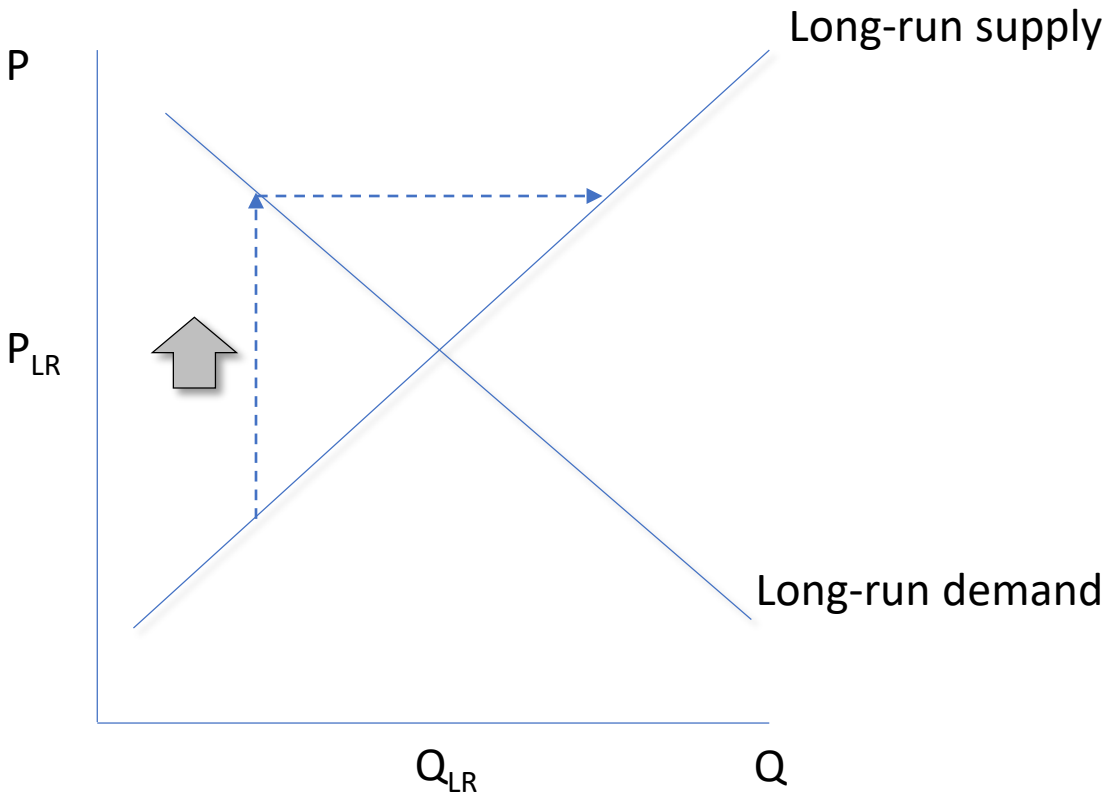
Biology behind cattle cycles



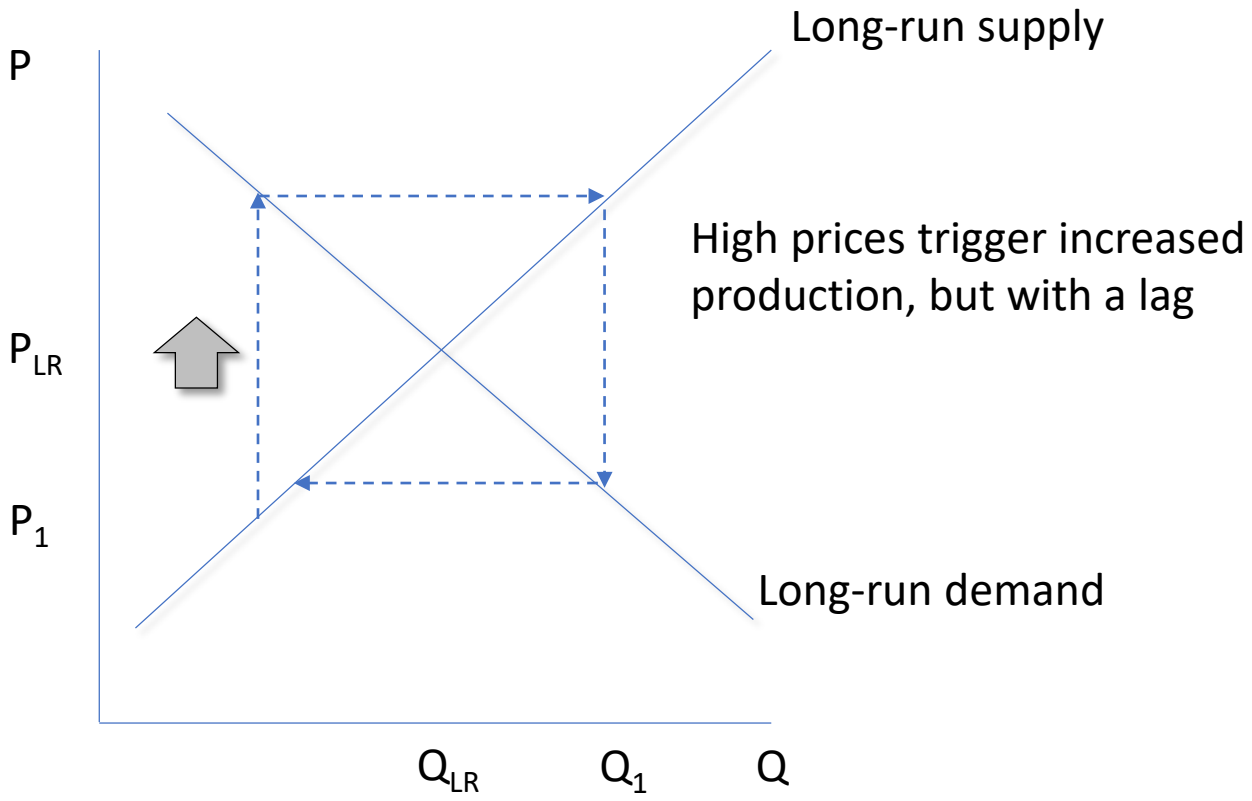
Source: Ferris, 1998

Cobweb theory of cycles

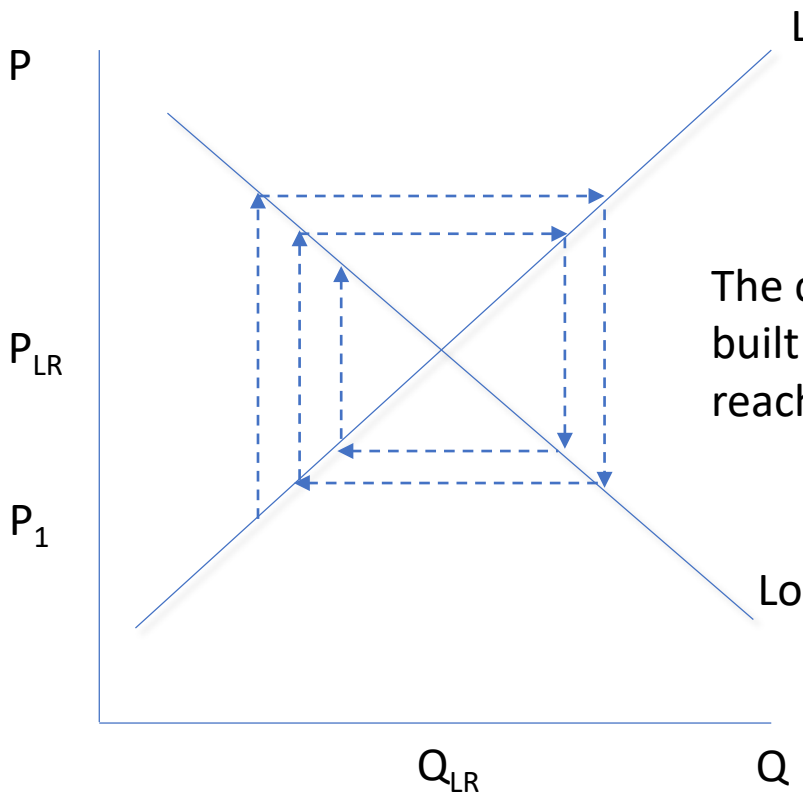
Lower market prices due to herd liquidation results in excess demand driving prices up.



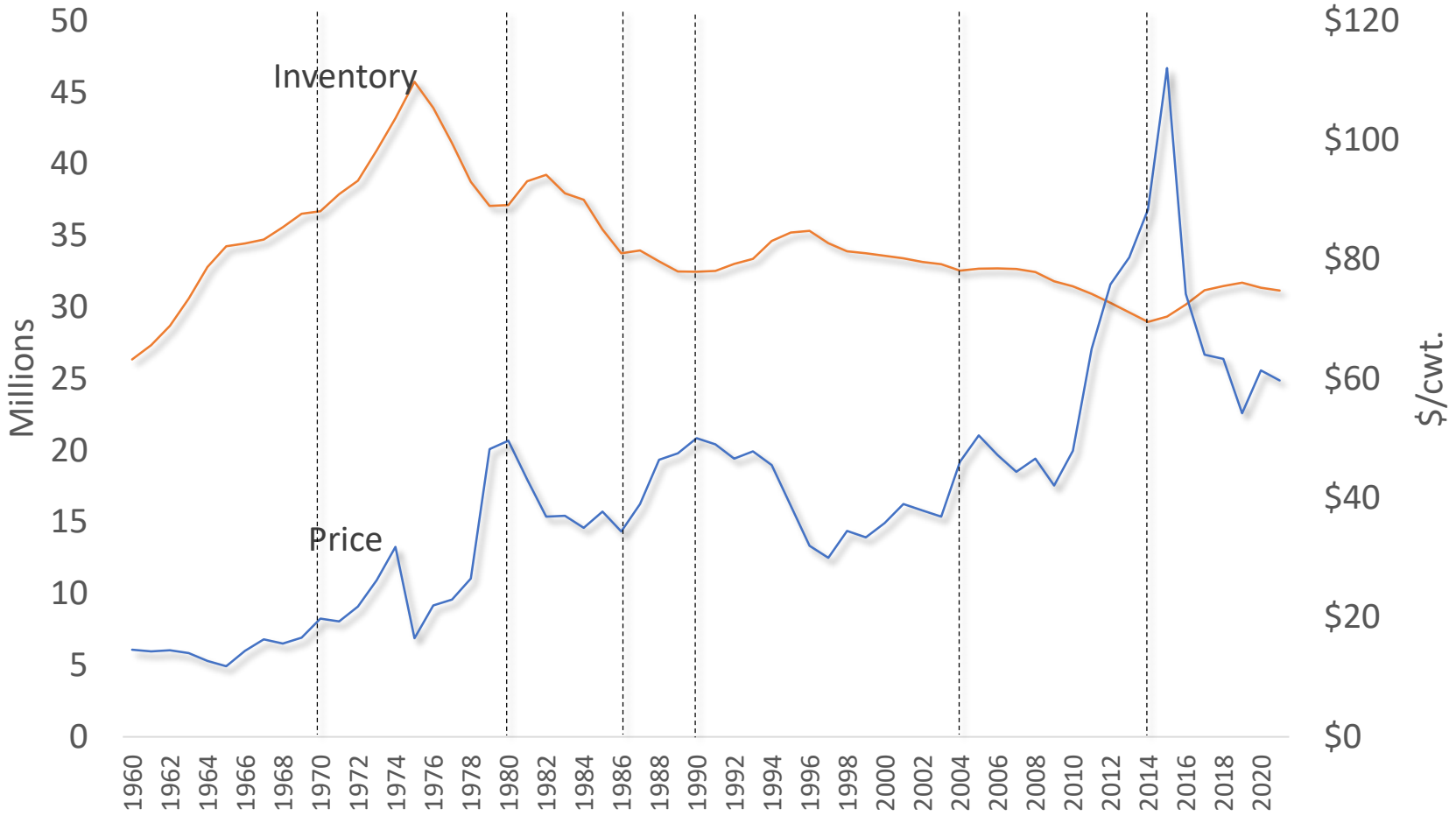
Cobweb theory of cycles



Cobweb theory of cycles



The cycle continues as ranchers built herds back and market reaches its long run equilibrium.


Inventory
Price
Millions
$/cwt.
50
45
40
35
30
25
20
15
10
5
0
$120
$100
$80
$60
$40
$20
$0
1960
1962
1964
1966
1968
1970
1972
1974
1976
1978
1980
1982
1984
1986
1988
1990
1992
1994
1996
1998
2000
2002
2004
2006
2008
2010
2012
2014
2016
2018
2020

How has drought impacted herd liquidation?

Difficult to say for sure. We don't know

- what would have happened absent the drought as herd sizes were decreasing prior to 2021
- the impacts of other "black swan" events, e.g., pandemic.

How has drought impacted herd liquidation?

What we do know

- Cow liquidation
  - Beef cow slaughter is up 8.7% year-over-year through mid-august → implies an annual cow slaughter of 3.5 million head
  - Loss of 3.5 million head → 11.4% net cull rate (largest since 2011)
    - Average cull rate over last two years 10.25%
    - Average cull rate over last 35 years = 9.65%
- Heifer replacements
  - Heifer slaughter is up 1.4% year-over-year*
  - Beef replacement heifers down 2.3% in July

Source: Peel, 2021

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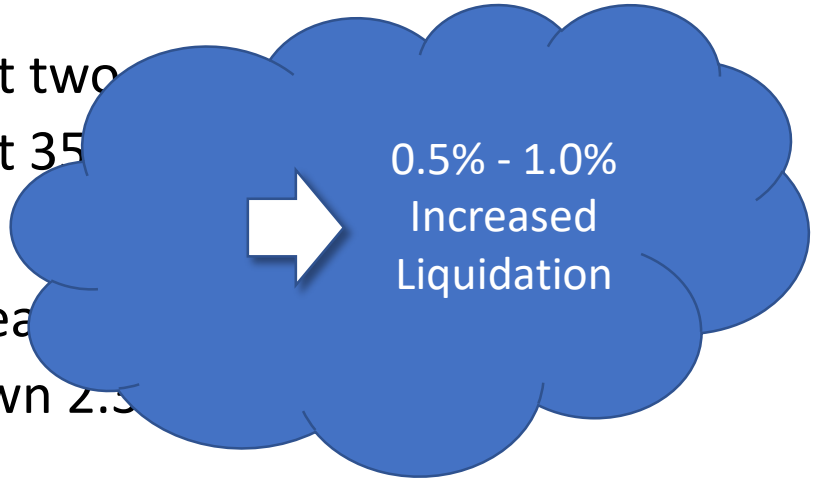
    - Average cull rate over last two
    - Average cull rate over last 35
- Heifer replacements
  - Heifer slaughter is up 1.4% yea
  - Beef replacement heifers down 2.5



Source: Peel, 2021

Questions?

Contact Information

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