

Short and Long-Run Impacts on Price Due to the Tyson Plant Closure in Lexington, NE



Center for Agriculture Profitability
cap.unl.edu/elliott-dennis

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WHAT IS HAPPENING? TYSON PLANT CLOSURE



- The Lexington plant employs roughly 3,200 people in the city of 11,000 and has the capacity to slaughter some 5,000 head of cattle a day.
- Tyson also plans to cut one of the two shifts at a plant in Amarillo, Texas, and eliminate 1,700 jobs there.
- Together those two moves will reduce beef processing capacity nationwide by 7-9%.

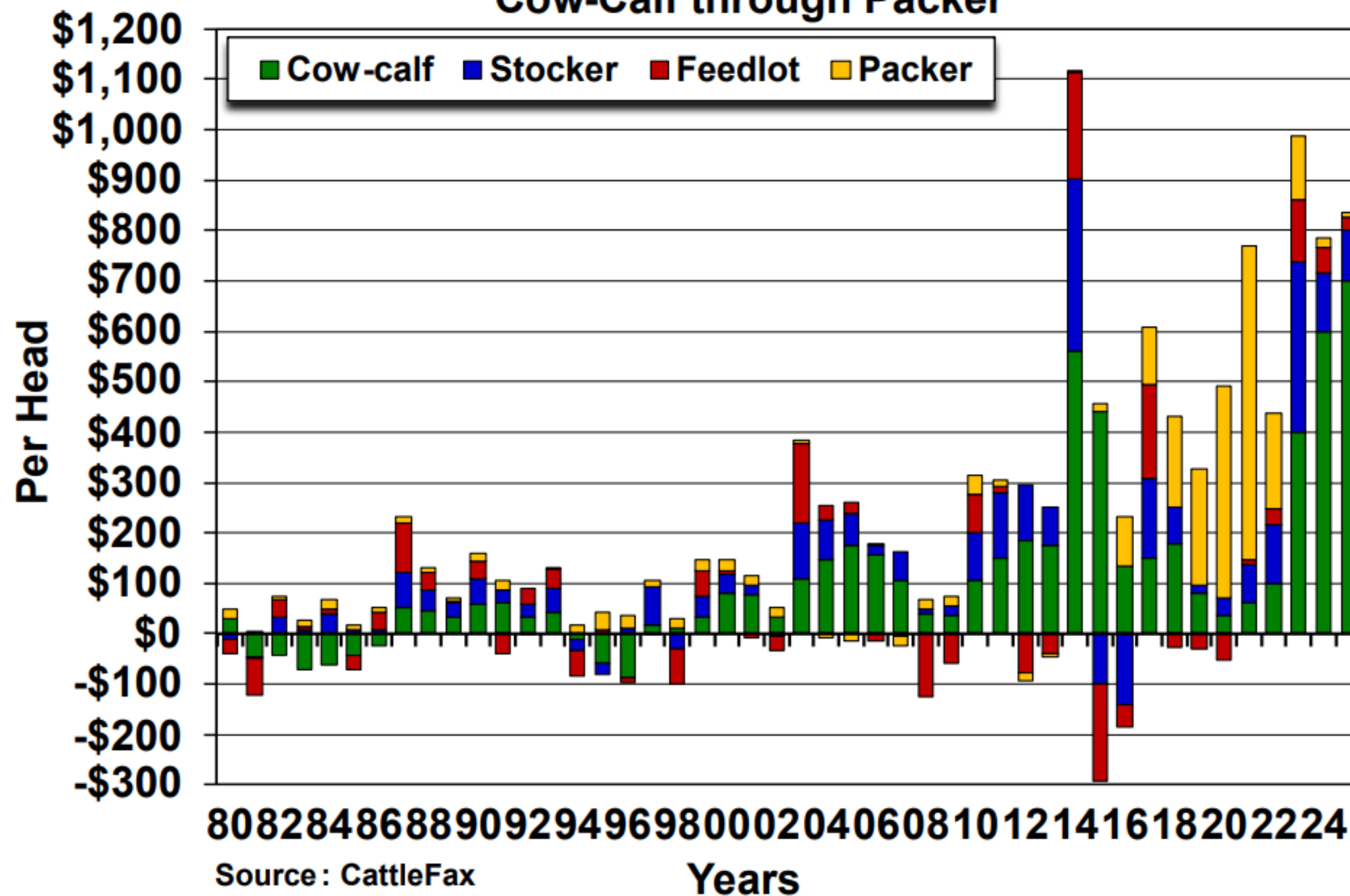


It appears they will be focusing on improving capacity utilization at its Amarillo plant and its four other plants (Dakota City, NE; Finney Country, KS; Joslin, IL; and Pasco, WA)



PROFITABILITY BY SECTOR

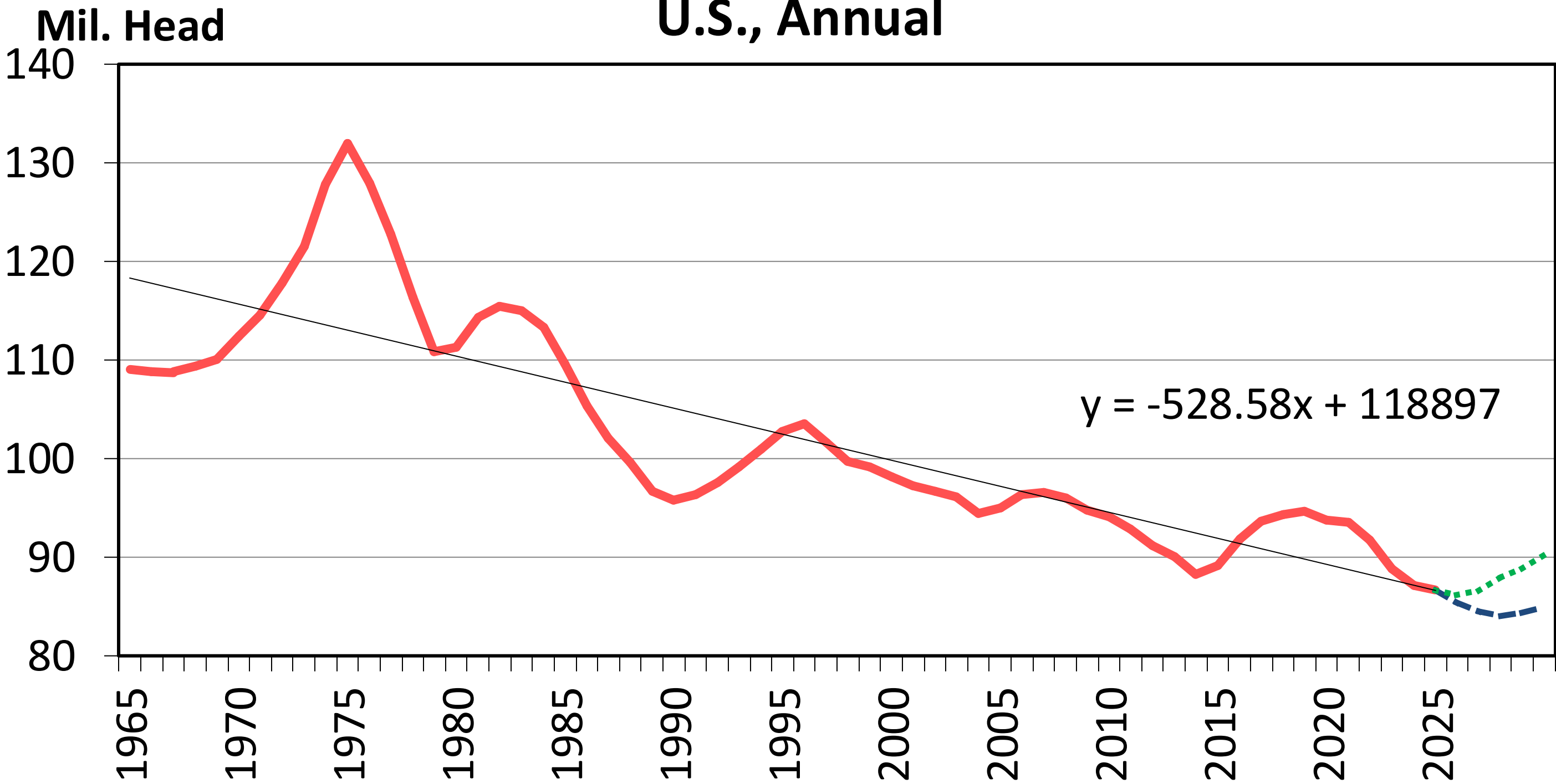
Beef Industry Profitability Cow-Calf through Packer



WHY IS THIS HAPPENING?



JANUARY 1 TOTAL CATTLE INVENTORY U.S., Annual

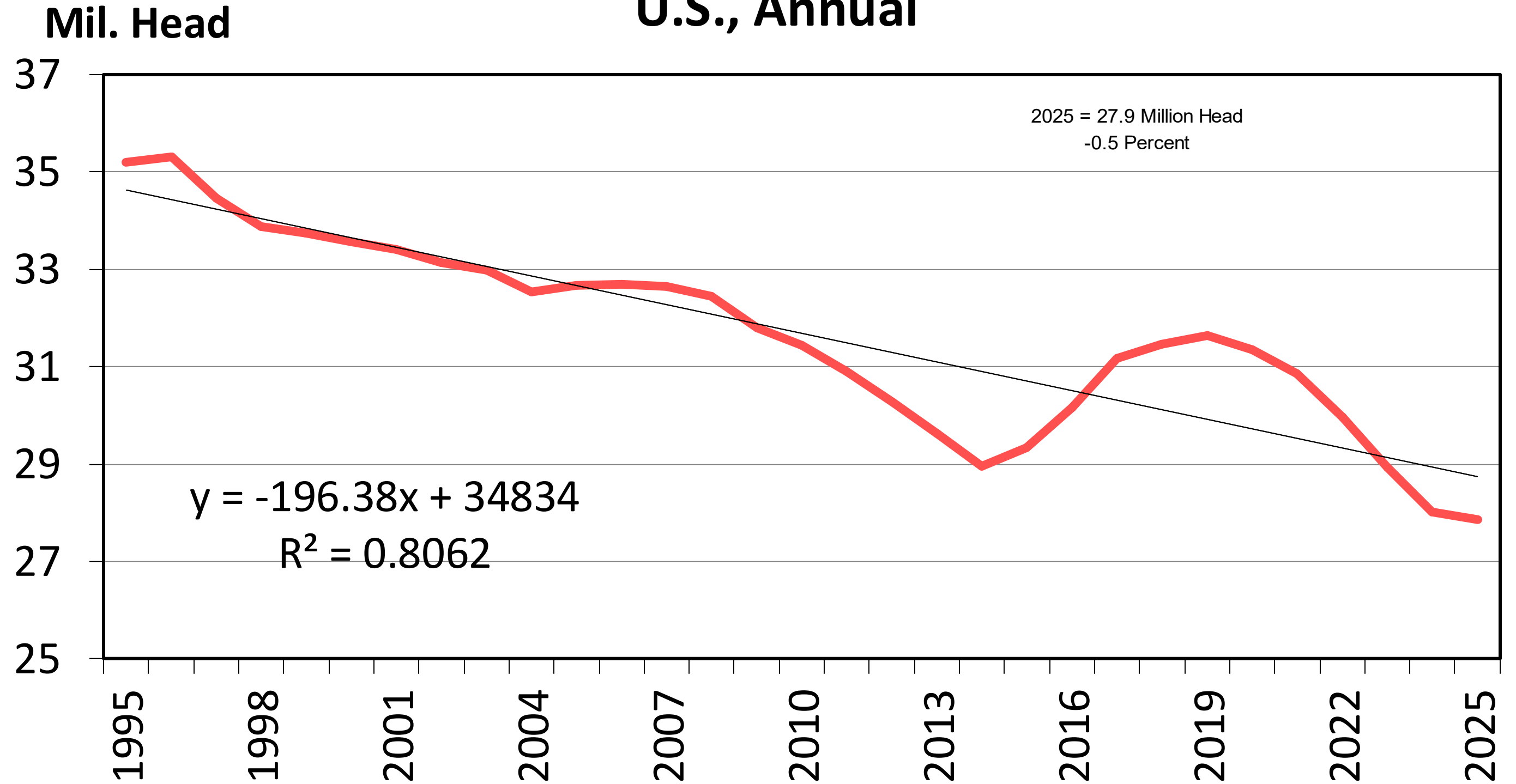


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JANUARY 1 COW INVENTORY

U.S., Annual



Data Source: USDA-NASS

— Beef — Linear (Beef) — Linear (Beef)

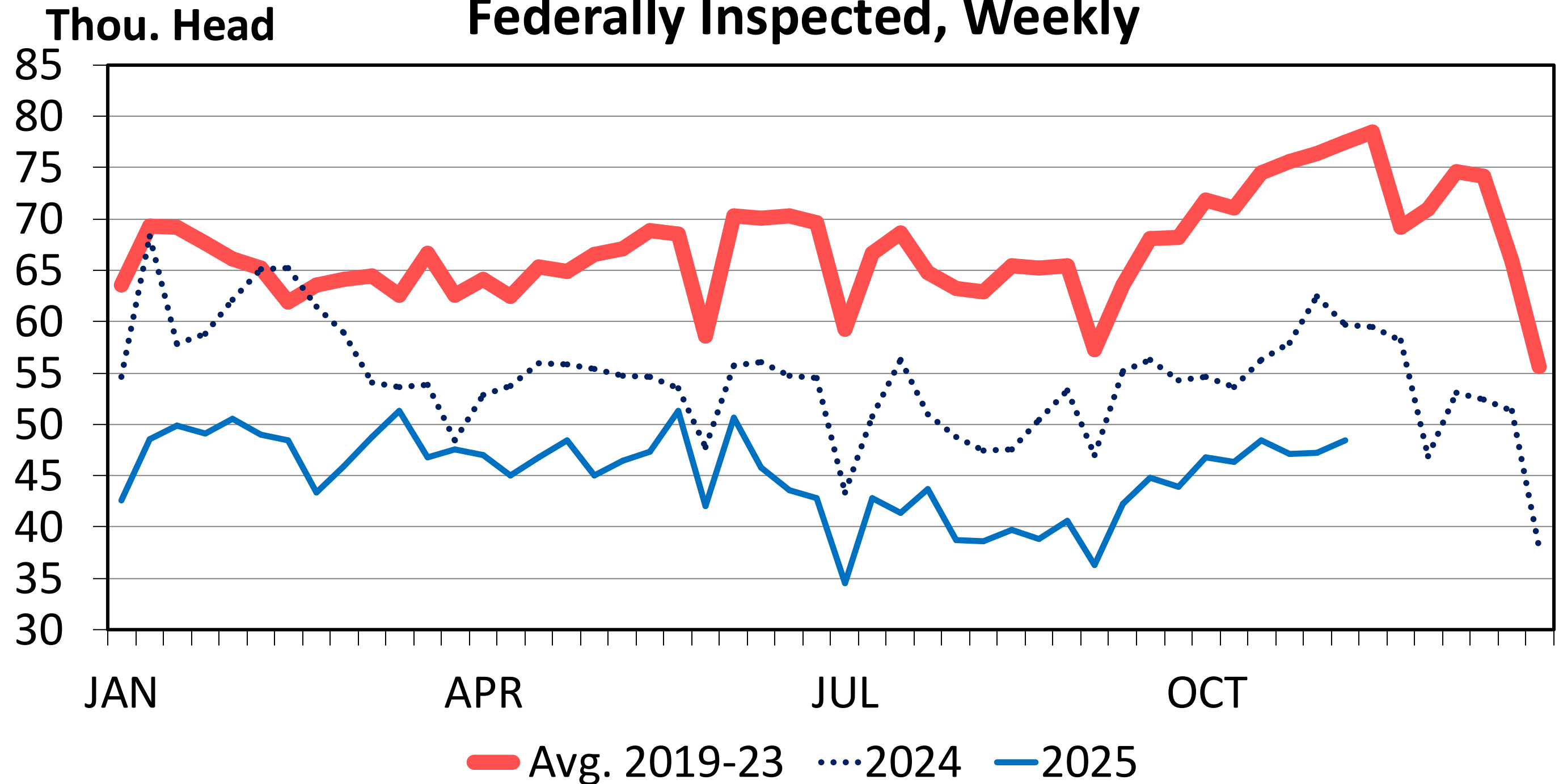
0-N-02
07/25/25

Livestock Marketing Information Center



BEEF COW SLAUGHTER

Federally Inspected, Weekly



Data Source: USDA-AMS & USDA-NASS

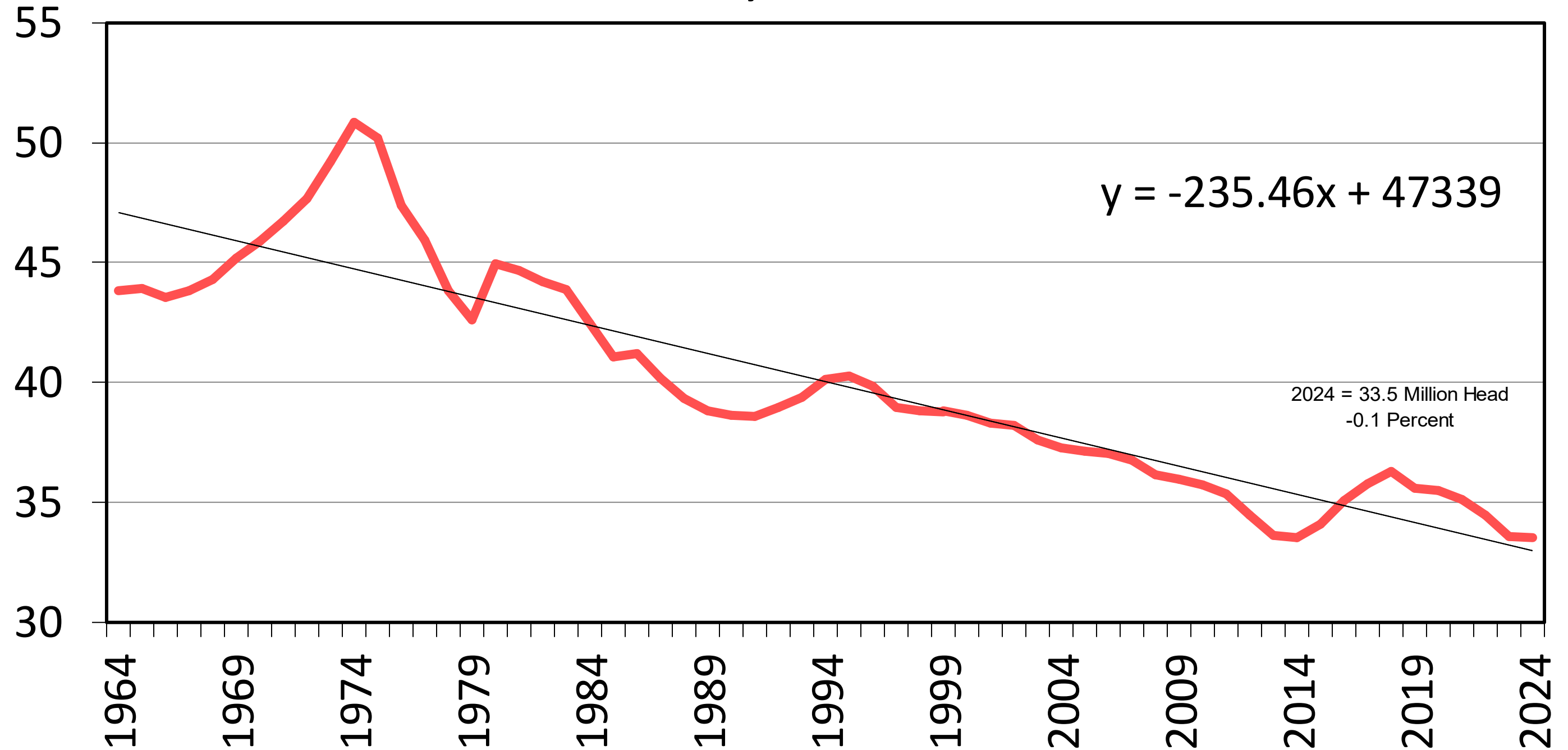
Livestock Marketing Information Center

C-S-34
11/21/25



CALF CROP U.S., Annual

Mil. Head



Data Source: USDA-NASS

Livestock Marketing Information Center

C-N-18A
07/25/25



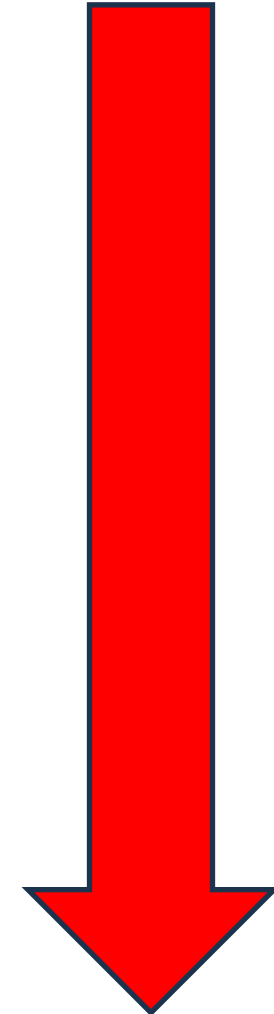
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02/03/25



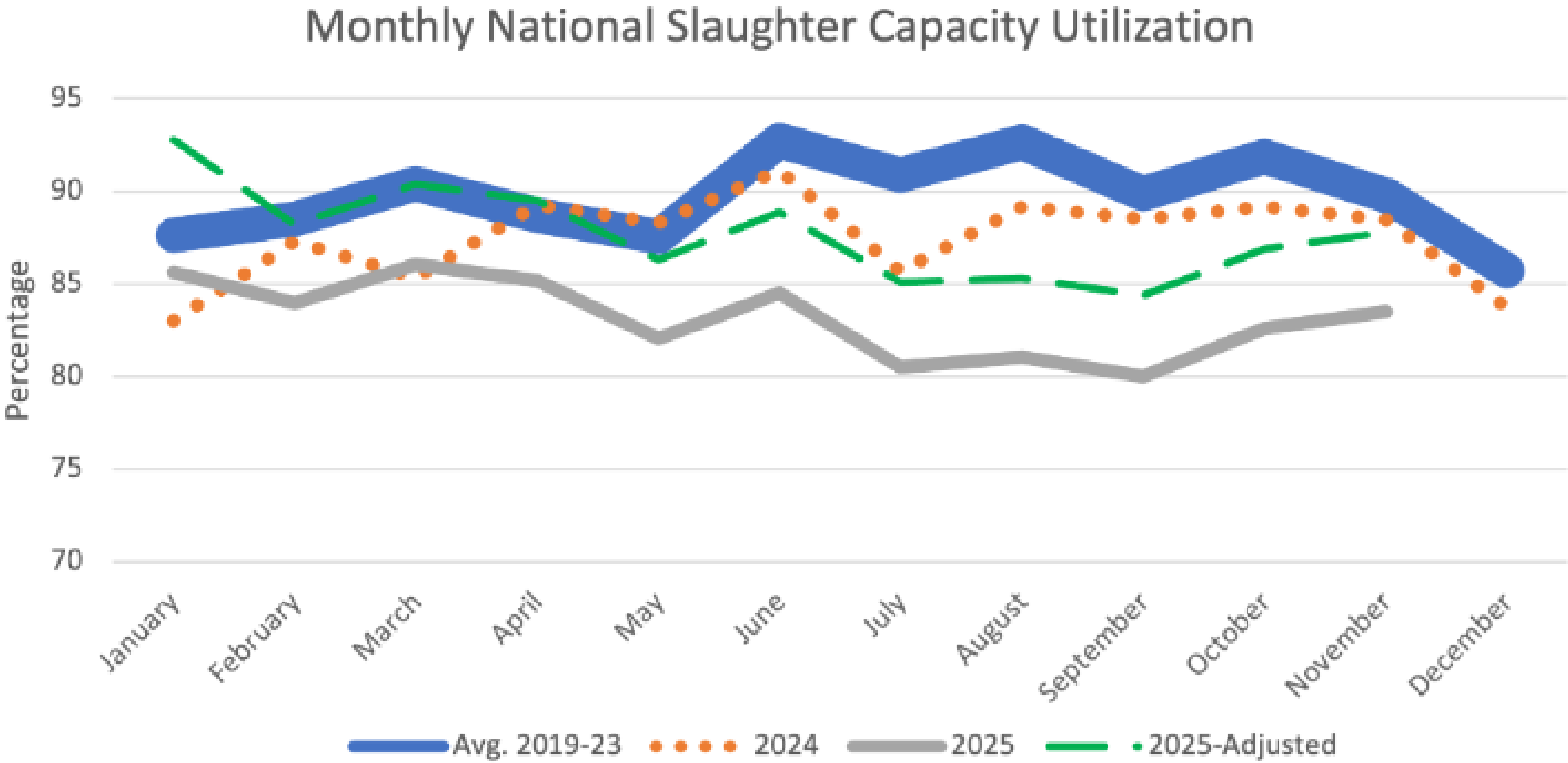
QUARTERLY COMMERCIAL CATTLE SLAUGHTER, BEEF PRODUCTION, PER CAPITA BEEF DISAPPEARANCE AND CATTLE PRICES ^a

| Year Quarter | Comm'l Slaughter (1,000 Head) | % Chg. from Year Ago | Average Dressed Weight (Lbs.) | % Chg. from Year Ago | Comm'l Beef Production (Mil. Lbs.) | % Chg. from Year Ago |
|------------------|-------------------------------------|----------------------------|--|----------------------------|---|----------------------------|
| 2025 | | | | | | |
| I | 7524 | -4.2 | 870 | 4.1 | 6543 | -0.2 |
| II | 7447 | -7.0 | 866 | 2.7 | 6453 | -4.6 |
| III ^b | 7387 | -7.6 | 867 | 2.3 | 6404 | -5.6 |
| IV ^c | 7362 | -7.6 | 880 | 1.9 | 6478 | -5.9 |
| Year | 29720 | -6.6 | 871 | 2.7 | 25878 | -4.1 |
| 2026 | | | | | | |
| I | 7082 | -5.9 | 883 | 1.5 | 6252 | -4.4 |
| II | 7012 | -5.8 | 878 | 1.3 | 6153 | -4.6 |
| III | 6955 | -5.9 | 875 | 1.0 | 6089 | -4.9 |
| IV | 6940 | -5.7 | 890 | 1.1 | 6174 | -4.7 |
| Year | 27988 | -5.8 | 881 | 1.2 | 24668 | -4.7 |
| 2027 | | | | | | |
| I | 6732 | -4.9 | 894 | 1.2 | 6017 | -3.8 |
| II | 6664 | -5.0 | 888 | 1.2 | 5920 | -3.8 |
| III | 6626 | -4.7 | 887 | 1.3 | 5875 | -3.5 |
| IV | 6635 | -4.4 | 901 | 1.2 | 5975 | -3.2 |
| Year | 26657 | -4.8 | 892 | 1.2 | 23787 | -3.6 |

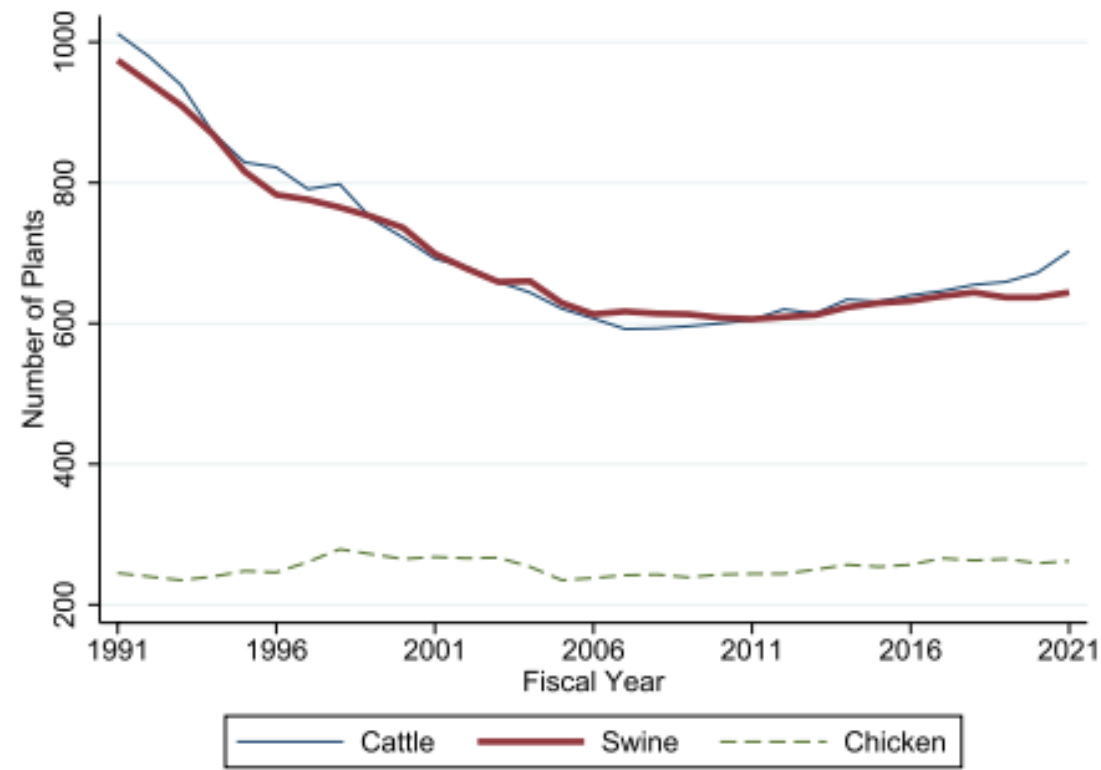


CAPACITY UTILIZATION

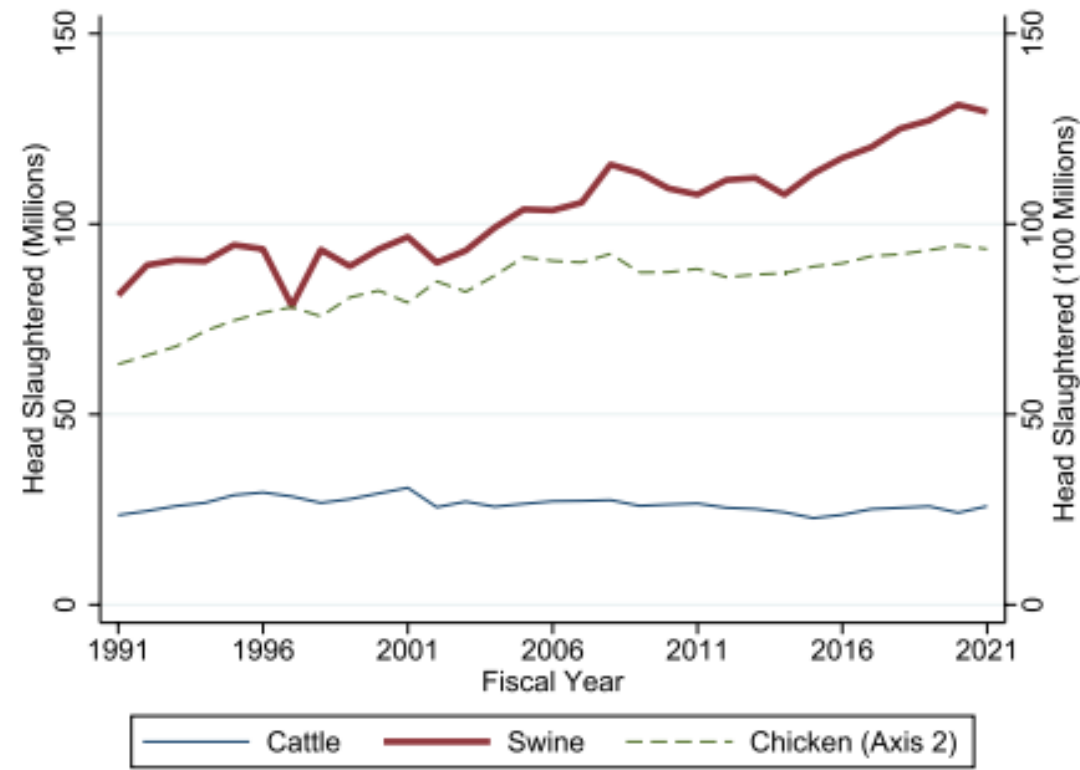
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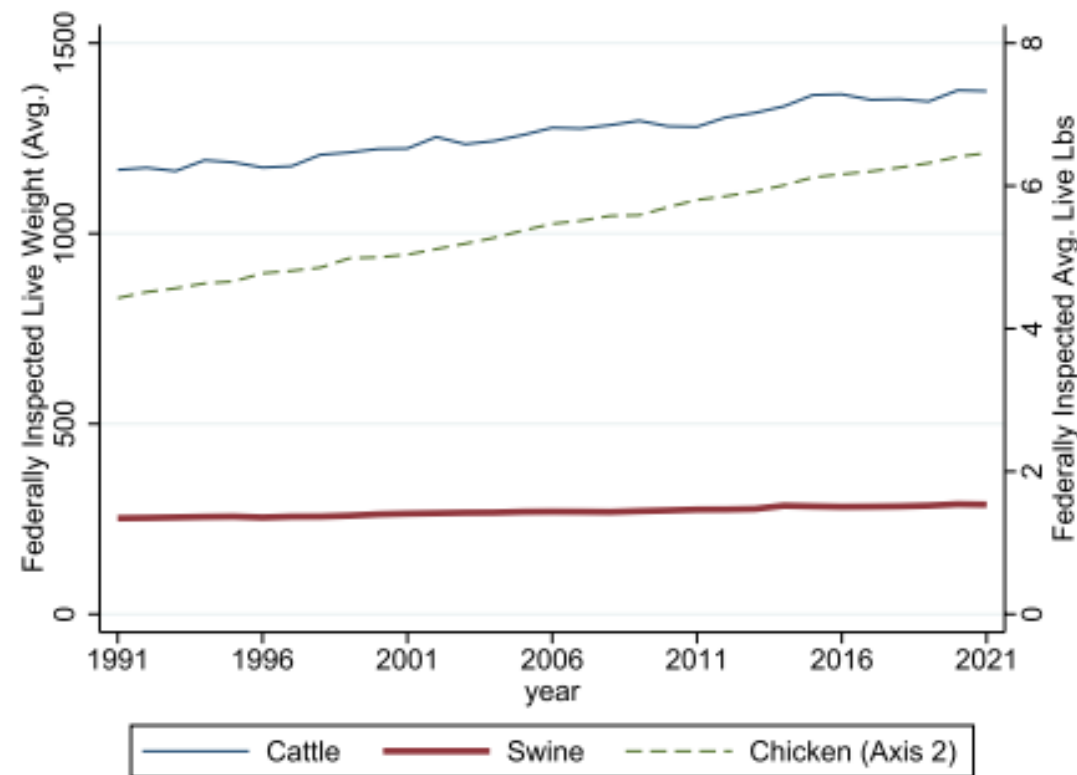
MEAT PROCESSING STATISTICS



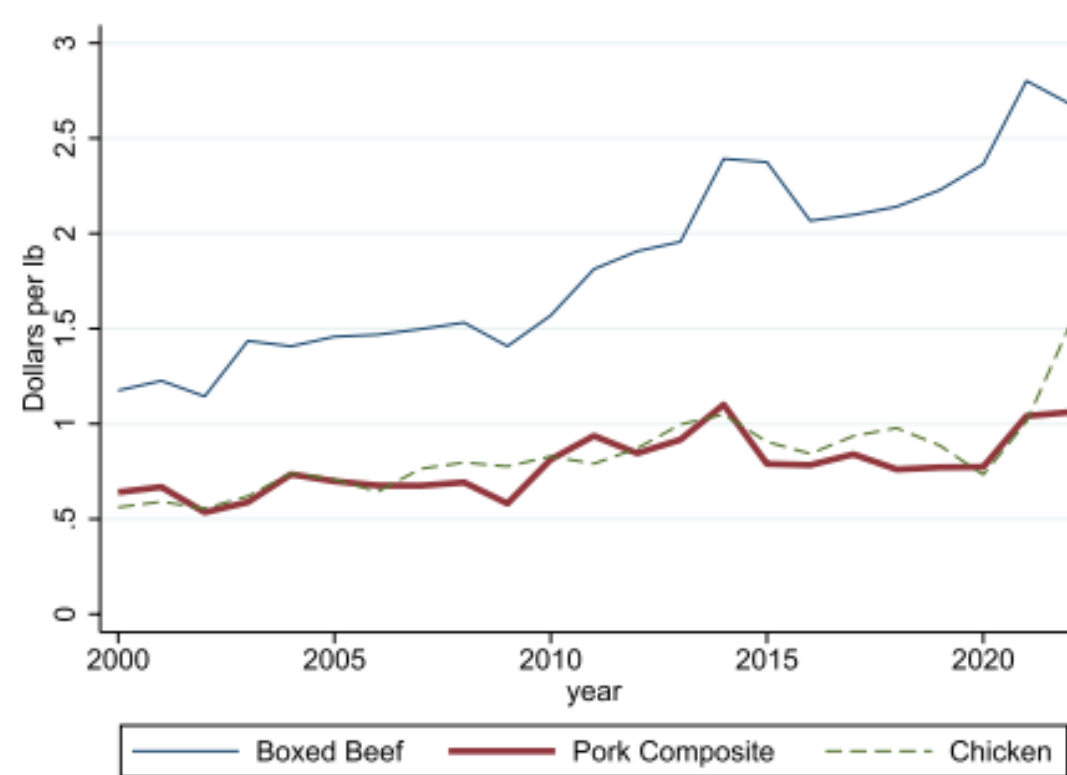
(a) Federally Inspected Plants



(b) Federally Inspected Production



(c) Federally Inspected Avg. Live Pounds



(d) Wholesale Prices



PLANT LOCATION



(a) Beef Processing Plants

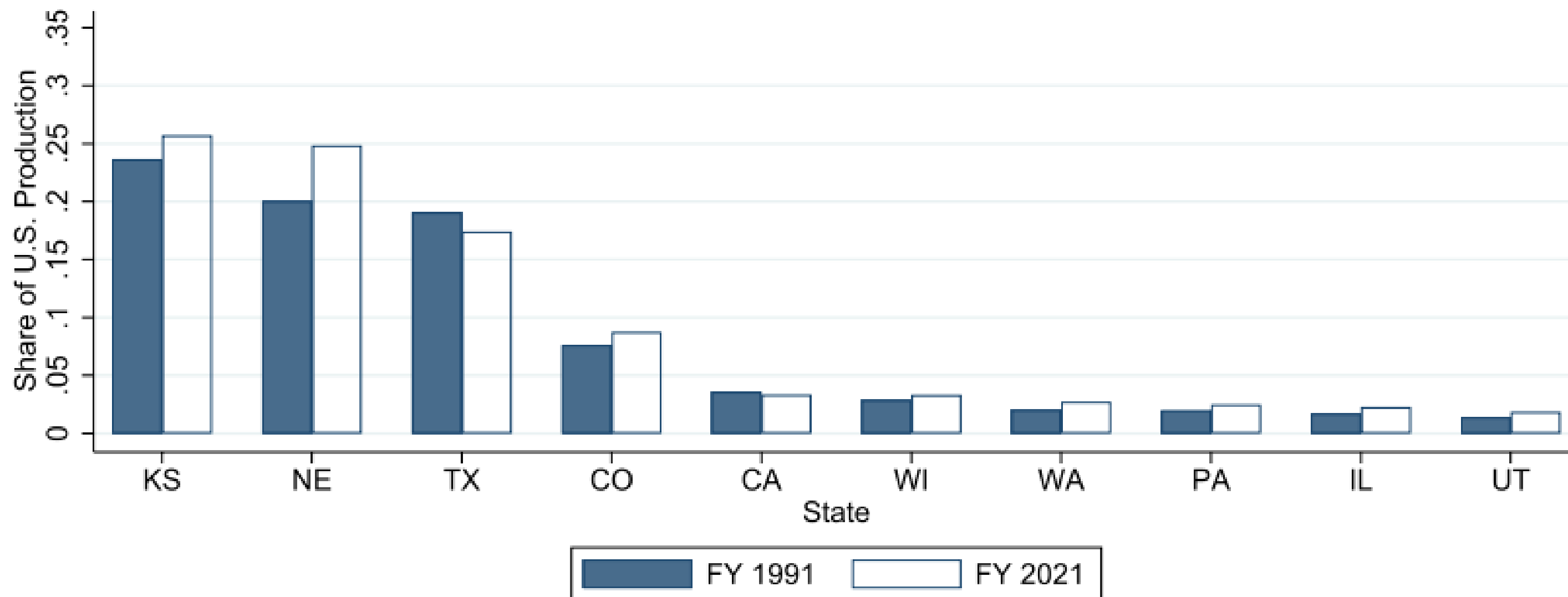


(b) Chicken Processing Plants



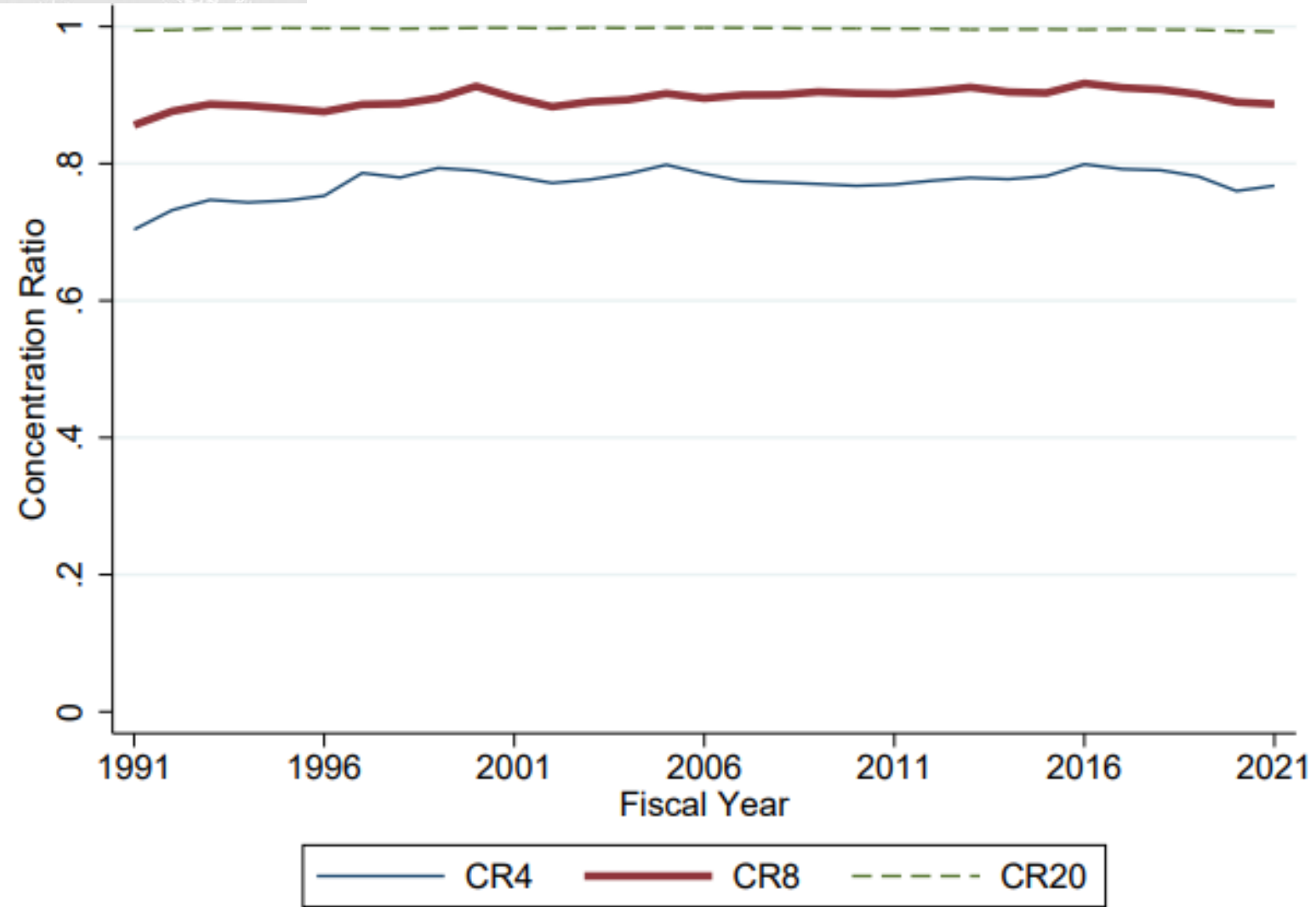
(c) Swine Processing Plants

PROCESSING PLANT CONCENTRATION: LOCATION

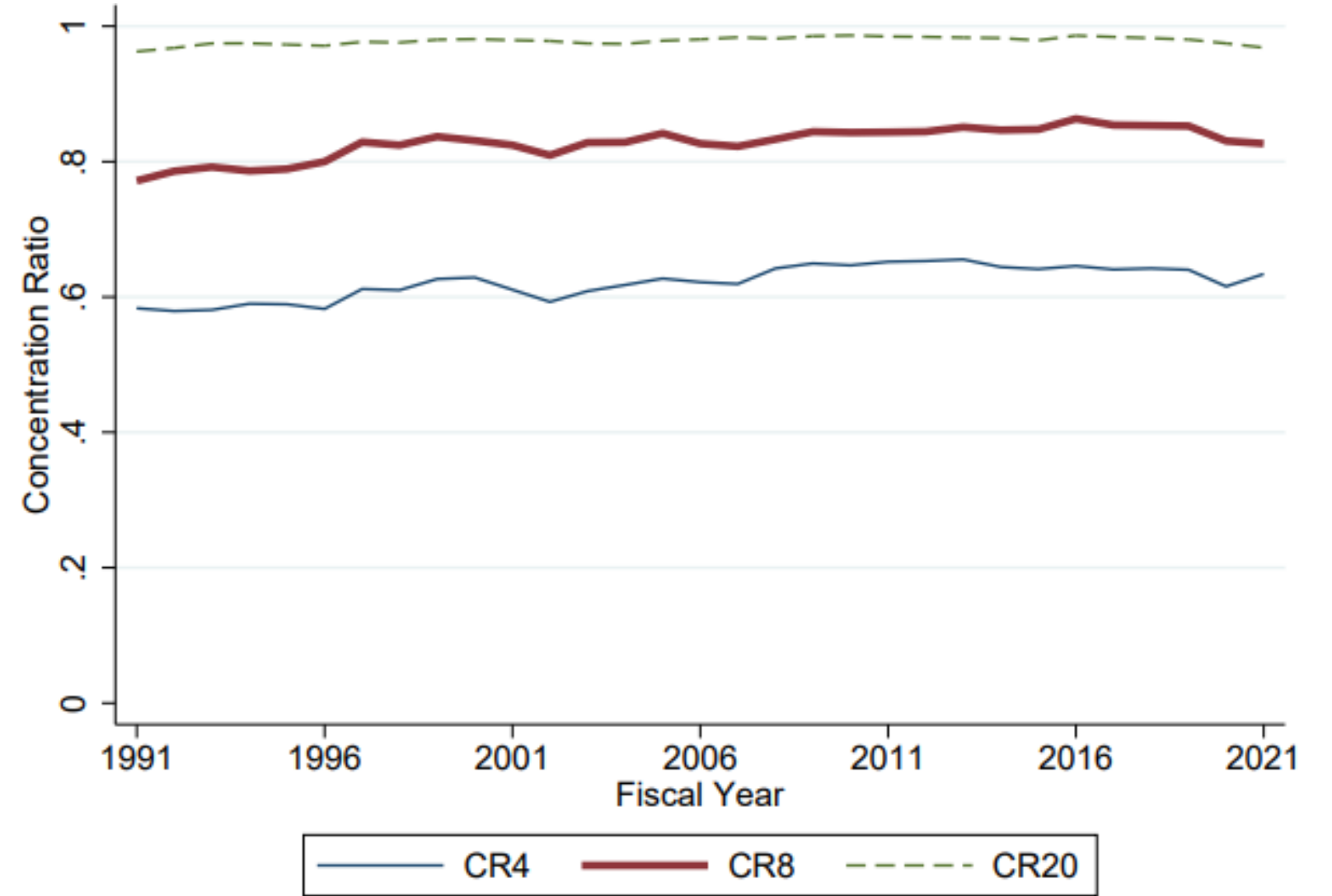


(a) Cattle (Steer and Heifer)

PROCESSING PLANT CONCENTRATION: TIME

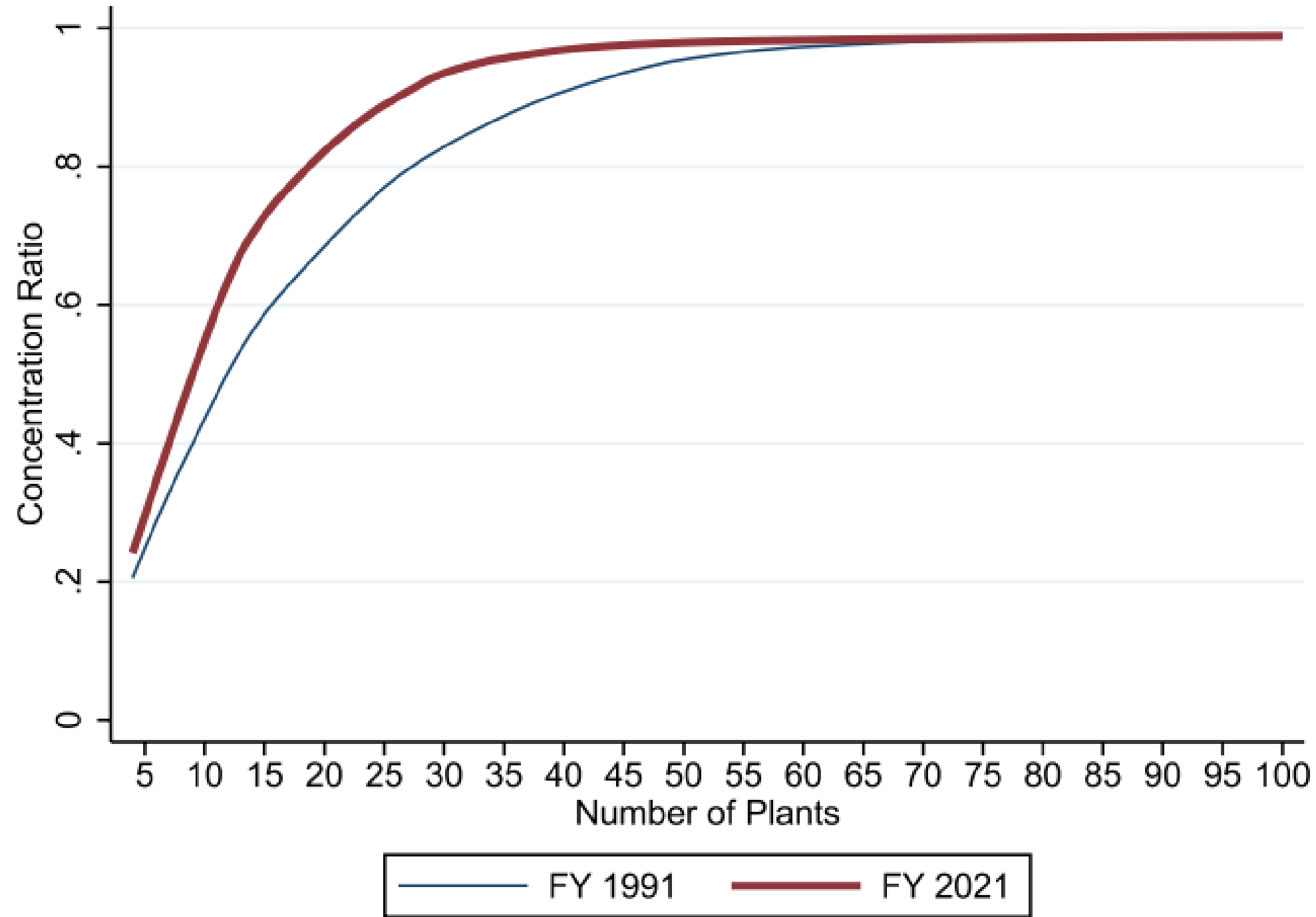


(a) Cattle (State-Level)



(b) Cattle (Agricultural Statistics District)

PROCESSING PLANT CONCENTRATION: PLANTS

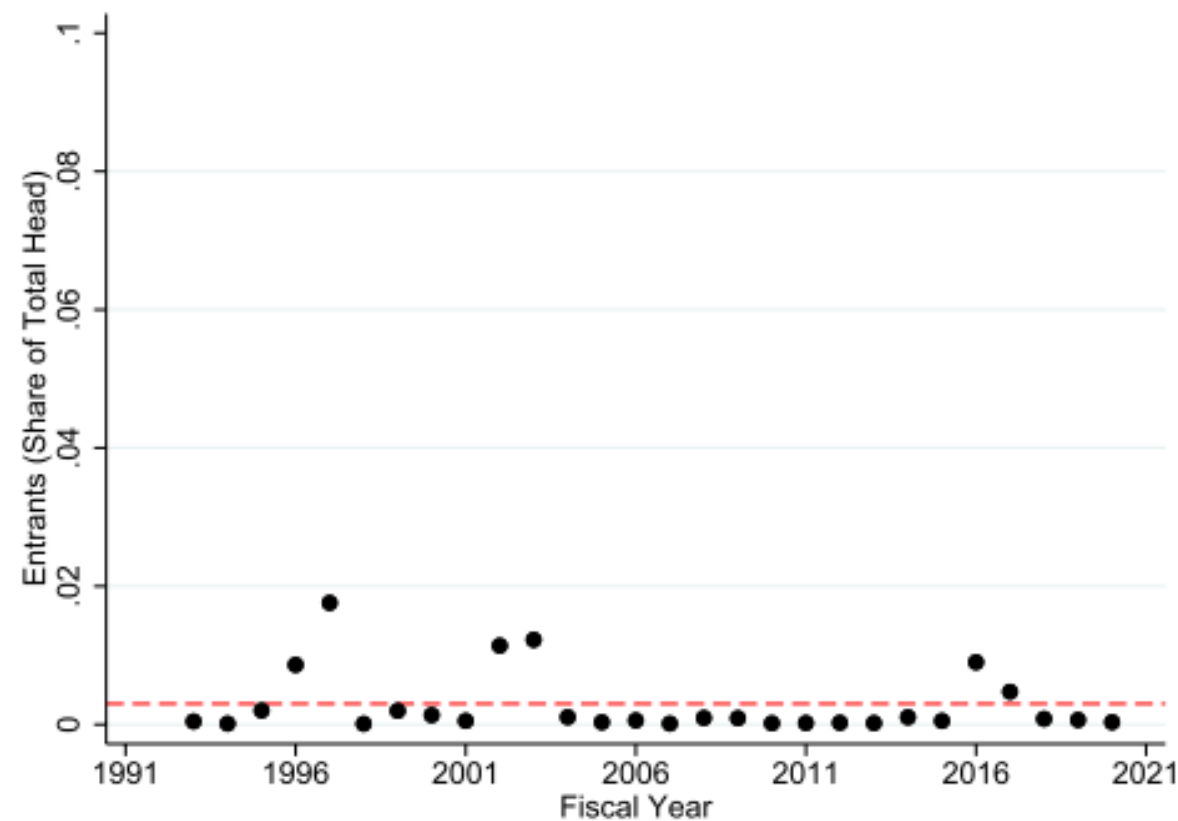


(a) Cattle (1991 and 2021)

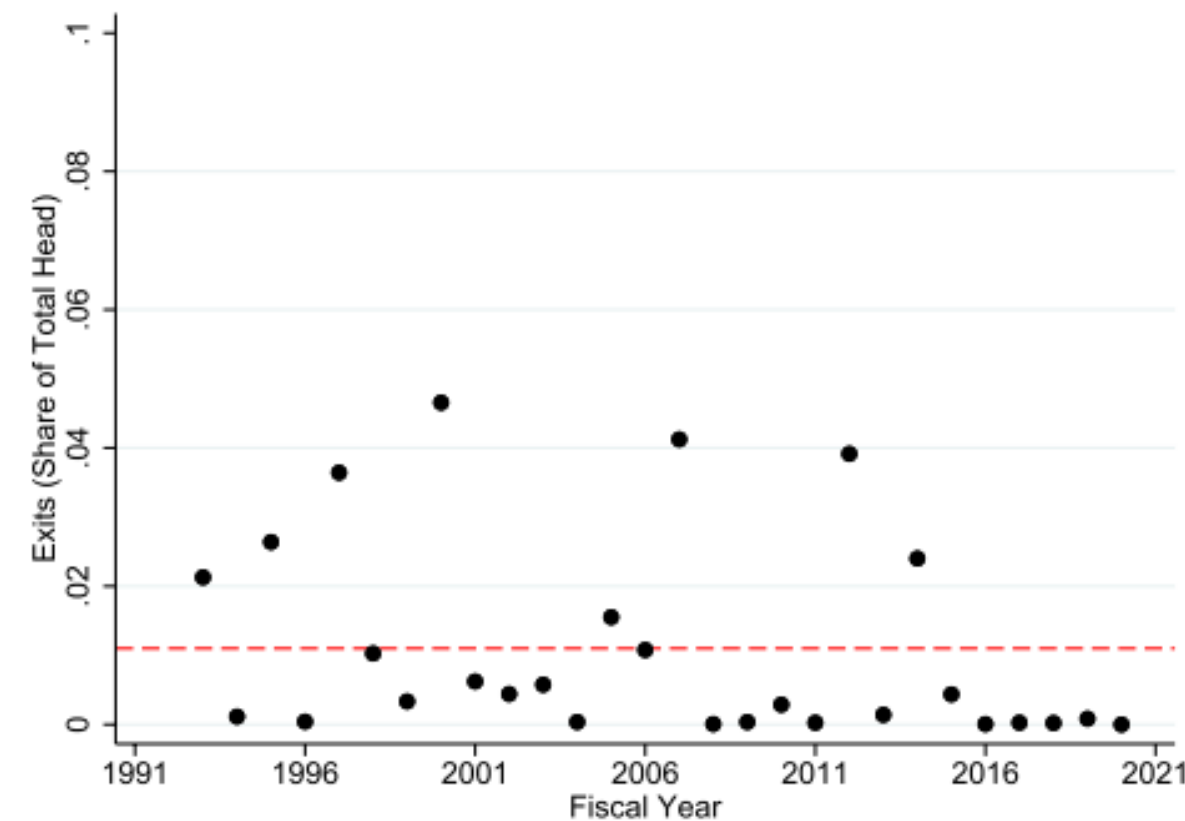
USDA grant dollars funding expansion (USDA committed over \$4 billion to strengthen the food supply chain, including \$500 million in grants)?



NEW PLANTS VS. EXPANDED CAPACITY



(a) Cattle (Entrants)



(b) Cattle (Exits)

| Firm | Number of Plants (Fed and Non-Fed) | Avg. Capacity (head/day) | Total Capacity | Adjusted Capacity |
|---------------|---------------------------------------|--------------------------|----------------|-------------------|
| JBS | 8 | 3,144 | 29,000 | 29,000 |
| Tyson | 6 | 4,600 | 27,600 | 18,100 |
| Cargill | 6 | 3,700 | 23,000 | 22,200 |
| National Beef | 3 | 4,400 | 13,200 | 13,200 |
| Other | 20 | 921 | 18,415 | 18,415 |

PERMANENT AND TEMPORARY BEEF PLANT CLOSURES

| Company | Location | Date | Capacity (hd/day) | Employees (total) | Description | Subsequent Use |
|----------------------------------|---------------------------|------------|-------------------|-------------------|---|--|
| Permanent (Since 2020) | | | | | | |
| ConAgra | Garden City, KS | 12/25/2000 | 4,400 | 2,300 | Fire at facility for federally inspected steer and heifer slaughter. Plant was permanently shut down | Not rebuilt |
| Tyson | West Point / Norfolk , NE | 2/15/2006 | 1,200 | 1,300 | Beef processing plant in Norfolk and beef slaughter plant in West Point closed to make room for the Dakota City plant | Vacant |
| Tyson | Emporia, KS | 2/6/2008 | 6,000 | 3,000 | Beef processing of FI steer and heifer processing plant citing excess capacity | Converted to ground beef plant (later closed in Dec 2024) |
| National Beef | Brawley, CA | 1/31/2014 | 1900 | 1300 | A declining supply of fed cattle available for the Brawley facility was a key driver of the decision to close the plant | Vacant |
| Cargill | Plainview, TX | 2/1/2013 | 4,650 | 2,000 | Beef processing of FI steer and heifer processing plant citing excess capacity | Vacant for several years then converted to a ground beef plant |
| Tyson | Lexington, NE | 1/20/2026 | 4,800 | 3,200 | Beef processing of FI steer and heifer processing plant citing excess capacity | Unknown |
| Recent Temporary Closures | | | | | | |
| Tyson | Holcomb, KS | 8/9/2019 | 6,000 | 3,800 | A fire occurred causing large damage to the plant and repairs took several months | Reopened several months later |
| COVID-19 | Nationwide | 4/4/2020 | Various | Various | Plants shutdown to prevent the spread of COVID-19 among workers leading to large disruptions along the supply chain | Plants opened with lower chain speeds and increased spacing |
| JBS® | Grand Island, NE | 9/13/2021 | 6,000 | 3,000 | Fire at plant due to heater malfunction in rendering which was repaired after several weeks | Remained open at lower speeds |



MORE YET SMALLER PLANT CLOSURES IN PORK

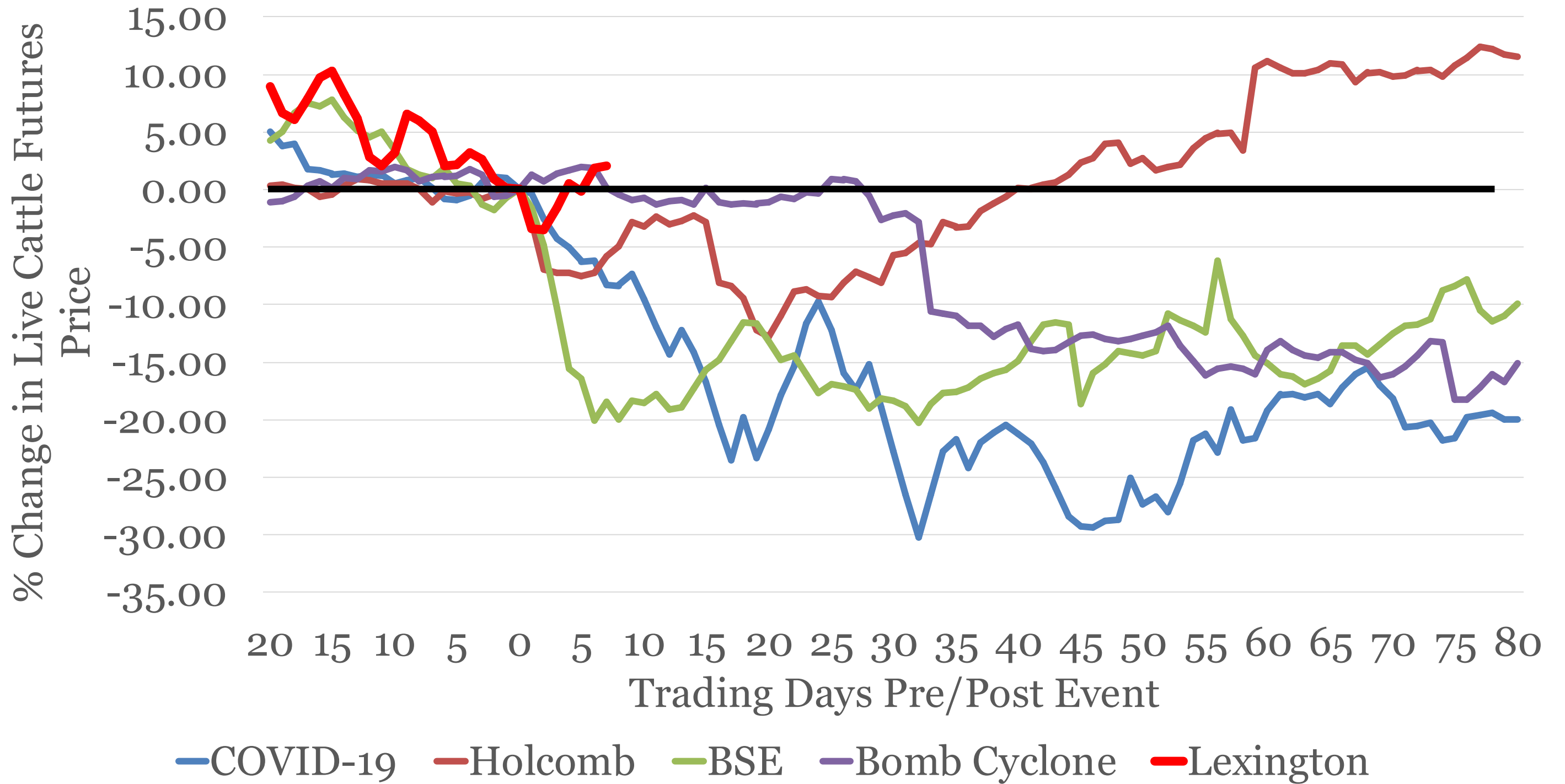
| | | | |
|----------------------------------|-----------------------------|----------------|----------------|
| AVA Pork | Shamokin, Pennsylvania | February 2000 | 2,500 |
| Farmland Foods | Dubuque, Iowa | June 2000 | 11,000 |
| Brown Packing | Little Rock, Arkansas | June 2000 | 600 |
| Fineberg Packing | Memphis, Tennessee | February 2001 | 500 |
| Excel | Marshall, Missouri | July 2001 | 8,000 |
| Mosby Packing Co. | Meridian, Mississippi | July 2001 | 400 |
| AMPAC/Iowa Pack | Chicago, Illinois | December 2001 | 3,600 |
| Hormel | Rochelle, Illinois | January 2003 | 7,100 |
| Metzger Foods | Paduca, Kentucky | March 2003 | 250 |
| Simeus Foods | Forest City, North Carolina | October 2003 | 300 |
| America's Family Farms | Alcester, South Dakota | November 2003 | 600 |
| RC Pork (Pork Packers Int'l) | Downs, Kansas | May 2004 | 1,500 |
| Smithfield Foods | Smithfield, Virginia | September 2005 | 7,800 |
| Bryan Foods (Sara Lea) | West Point, Mississippi | March 2006 | 6,200 |
| Lowell Packing | Fitzgerald, Georgia | June 2005 | 350 |
| Meadowbrook Farms* | Rantoul, Illinois | December 2008 | 3,800 |
| John Morrell | Sioux City, Iowa | April 2010 | 14,000 |
| Southern Pride Meats | Goldsboro, North Carolina | June 2010 | 210 |
| Bob Evans Farms | Galva, Illinois | August 2010 | 330 |
| Bob Evans Farms | Bidwell, Ohio | July 2011 | 220 |
| Cloverleaf Foods | Minot, North Dakota | June 2011 | 600 |
| J.C. Potter | Durant, Oklahoma | July 2012 | 400 |
| Odom's Tennessee Pride | Little Rock, Arkansas | April 2012 | 400 |
| Avco | Gadsen, Alabama | April 2012 | 210 |
| Bob Evans Farms | Richardson, Texas | October 2013 | 400 |
| Southern Quality Meats | Pontotoc, Mississippi | April 2014 | 160 |
| Kapowsin Meats, Inc. | Graham, Washington | July 2015 | 100 |
| Greenwood Packing | Greenwood, South Carolina | May 2016 | 3,000 |
| Kapowsin Meats, Inc. | Graham, Washington | August 2016 | 150 |
| Total Closed | | | 142,230 |
| *Reopened as Rantoul Foods, 2012 | | | -3,800 |
| Net Closed Capacity | | | 138,430 |





PRICE IMPACTS: COMPARING TO OTHERS

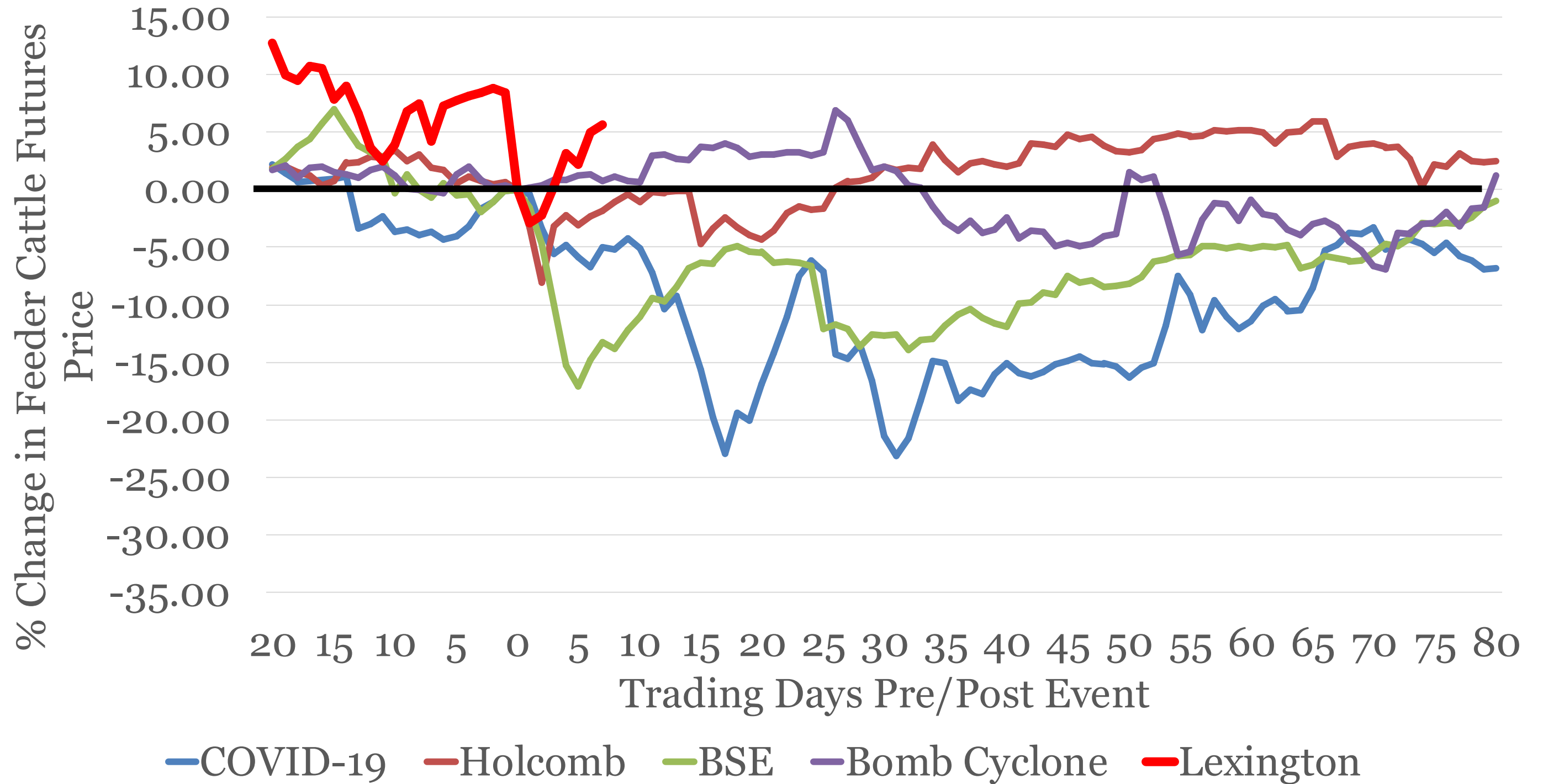
LIVE CATTLE



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PRICE IMPACTS: COMPARING TO OTHERS

FEEDER CATTLE



ARTICLE

Spatial price competition and buyer power in the U.S. beef packing industry

- Built a spatial model of the U.S. beef packing industry to analyze competition among packers.
- Used county-level fed cattle supplies from the 2022 Census of Agriculture matched with actual plant locations, capacity, and ownership.
- Plants in the model compete for cattle within each county, bidding against one another.
- Prices are determined using a Bertrand-Nash equilibrium, a common tool for modeling how competing buyers set prices.



- A “markdown” occurs when packers pay less for cattle than the animals’ true marginal value in their operations.
- It reflects buyer market power in an oligopsony setting.
- The markdown is the gap between:
 - the maximum price a plant could pay (based on beef prices and processing costs), and
 - the actual price paid to producers.
- Larger markdowns indicate stronger buyer advantage and lower prices received by producers.



ESTIMATED CHANGE IN MARKDOWN FROM LEXINGTON PLANT CLOSURE

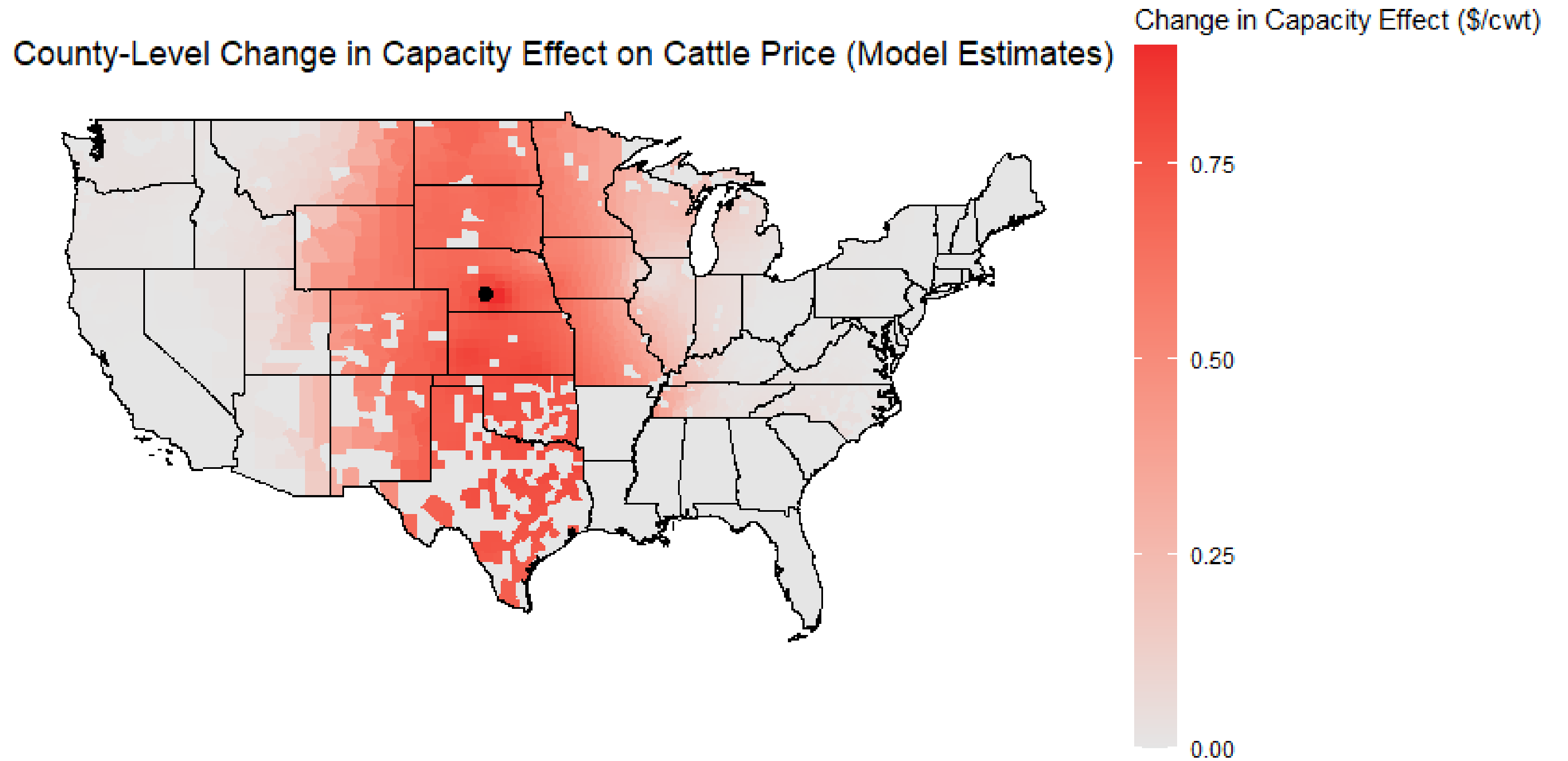
Table: Change in Model Outcomes: Lexington, NE Plant Exit vs. Baseline

| | | | Markdown Decomposition | | | |
|-----------|-------|---------------|------------------------|-------------|-------|-----------------|
| Area | Price | Full Markdown | Spatial | Multi-plant | AMA | Capacity Effect |
| Full U.S. | -0.63 | -0.02 | 0.16 | -0.02 | -0.16 | 0.59 |
| Kansas | -0.79 | -0.05 | 0.10 | -0.02 | -0.13 | 0.79 |
| Nebraska | -0.90 | -0.14 | 0.17 | -0.03 | -0.27 | 0.71 |
| Texas | -0.70 | 0.03 | 0.10 | -0.01 | -0.06 | 0.74 |
| Colorado | -0.83 | 0.14 | 0.12 | 0.01 | 0.00 | 0.66 |
| Iowa | -0.42 | 0.06 | 0.27 | -0.03 | -0.19 | 0.46 |

Note: All values are in units of \$/cwt.



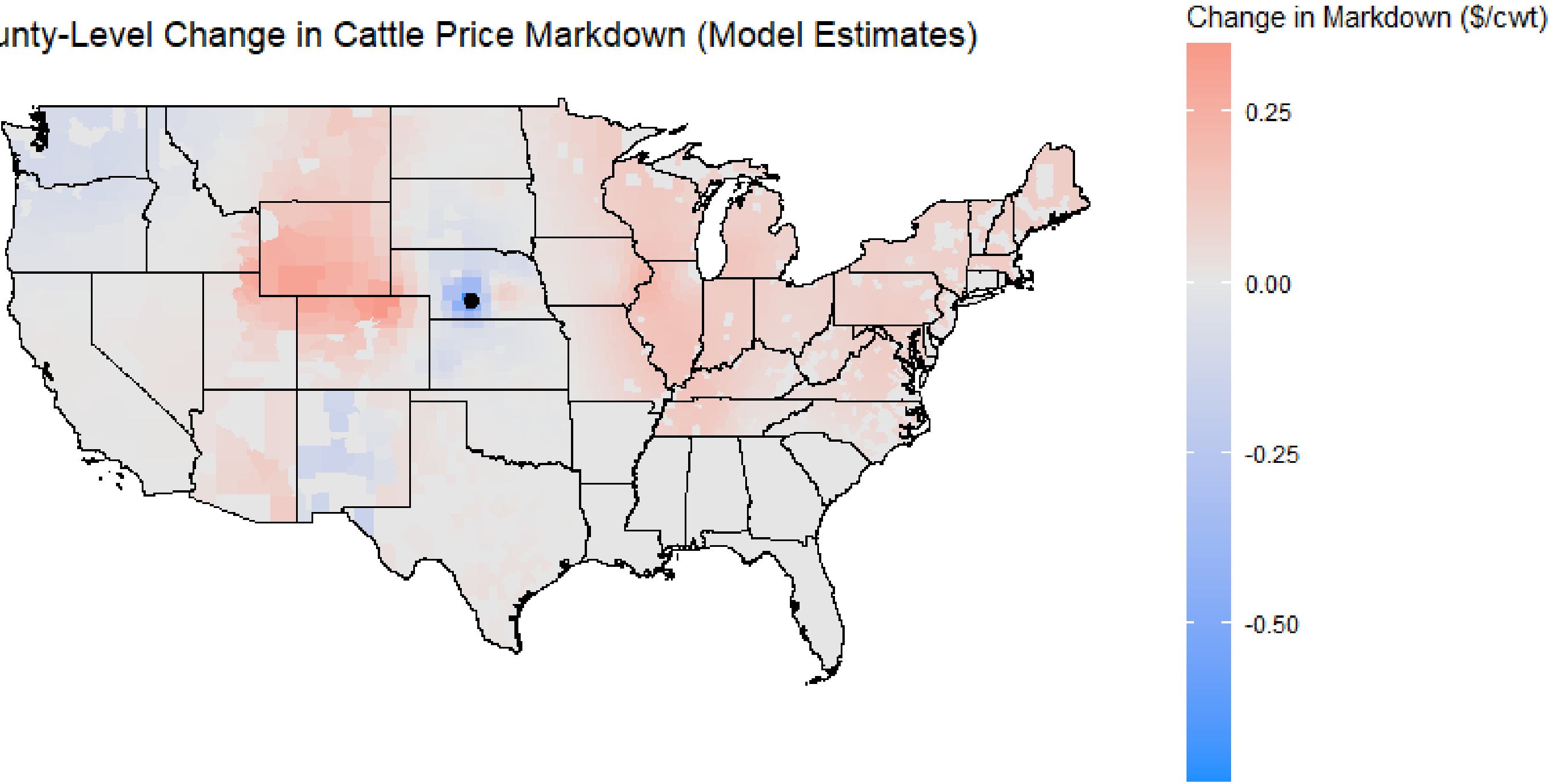
CHANGE IN CAPACITY CONSTRAINT



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CHANGE IN MARKDOWNS

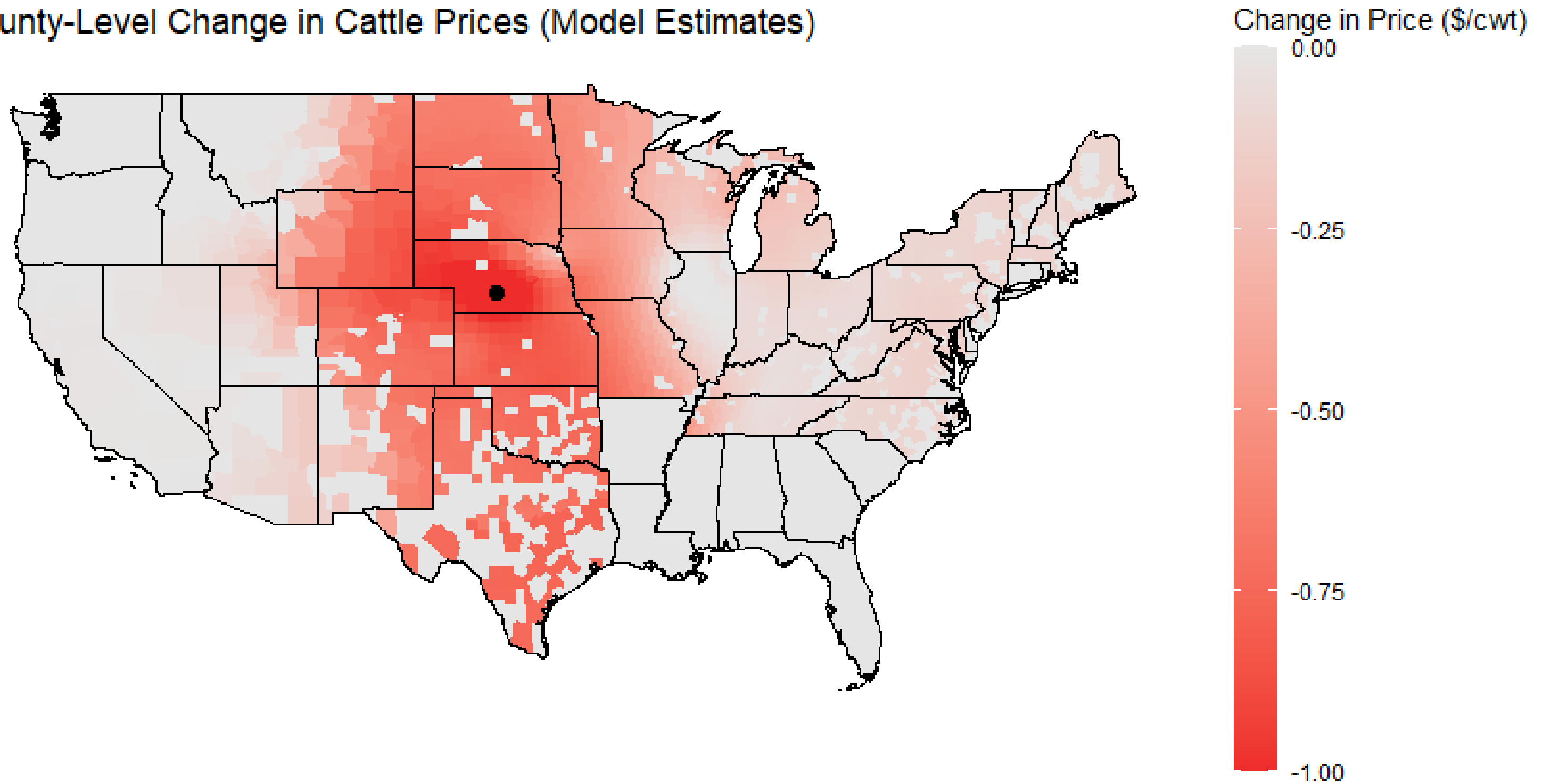
County-Level Change in Cattle Price Markdown (Model Estimates)



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CHANGE IN CATTLE PRICES

County-Level Change in Cattle Prices (Model Estimates)



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**Will have important implications for leverage
in the cattle markets**

Questions and Comments

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