

Beef Demand Considerations

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Questions touched on today...

- ❖ Is meat demand per capita meat consumption?
- ❖ Why is meat demand important?
- ❖ What do we know about COVID-19 impacts on U.S. meat demand?
- ❖ What factors impact U.S. beef demand?
- ❖ What is the impact of plant-based protein alternatives on U.S. beef demand?

Demand is **NOT** Per Capita Consumption

2013 Beef Demand Determinants Study



[http://www.beefboard.org/evaluation/
130612demanddeterminantstudy.asp](http://www.beefboard.org/evaluation/130612demanddeterminantstudy.asp)



MARKETING > OUTLOOK

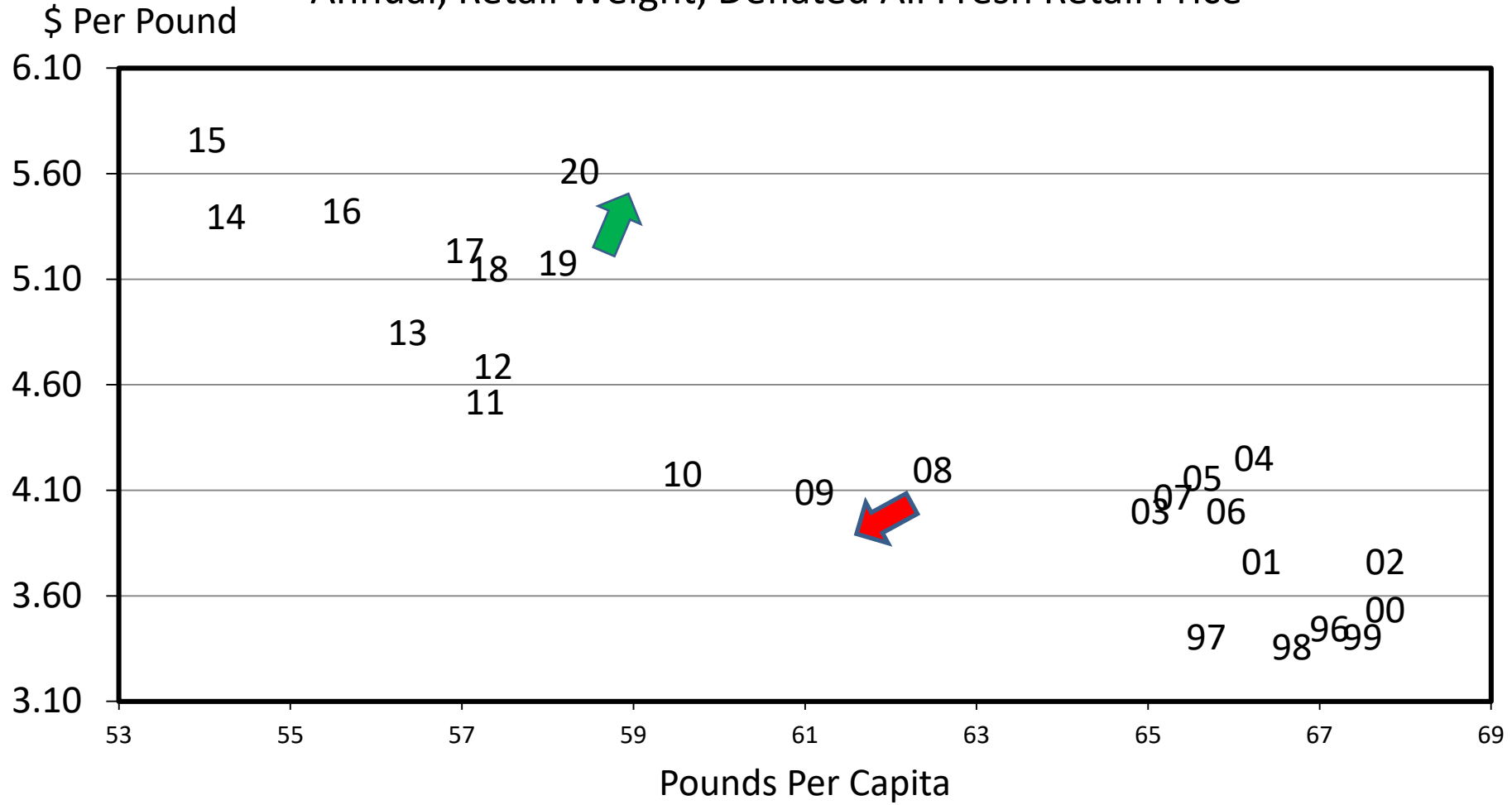
What's The Similarity Between Blue Jeans and Beef Demand?

Beef consumption and beef demand isn't the same thing. Here's an explanation.

Burt Rutherford | Sep 19, 2013

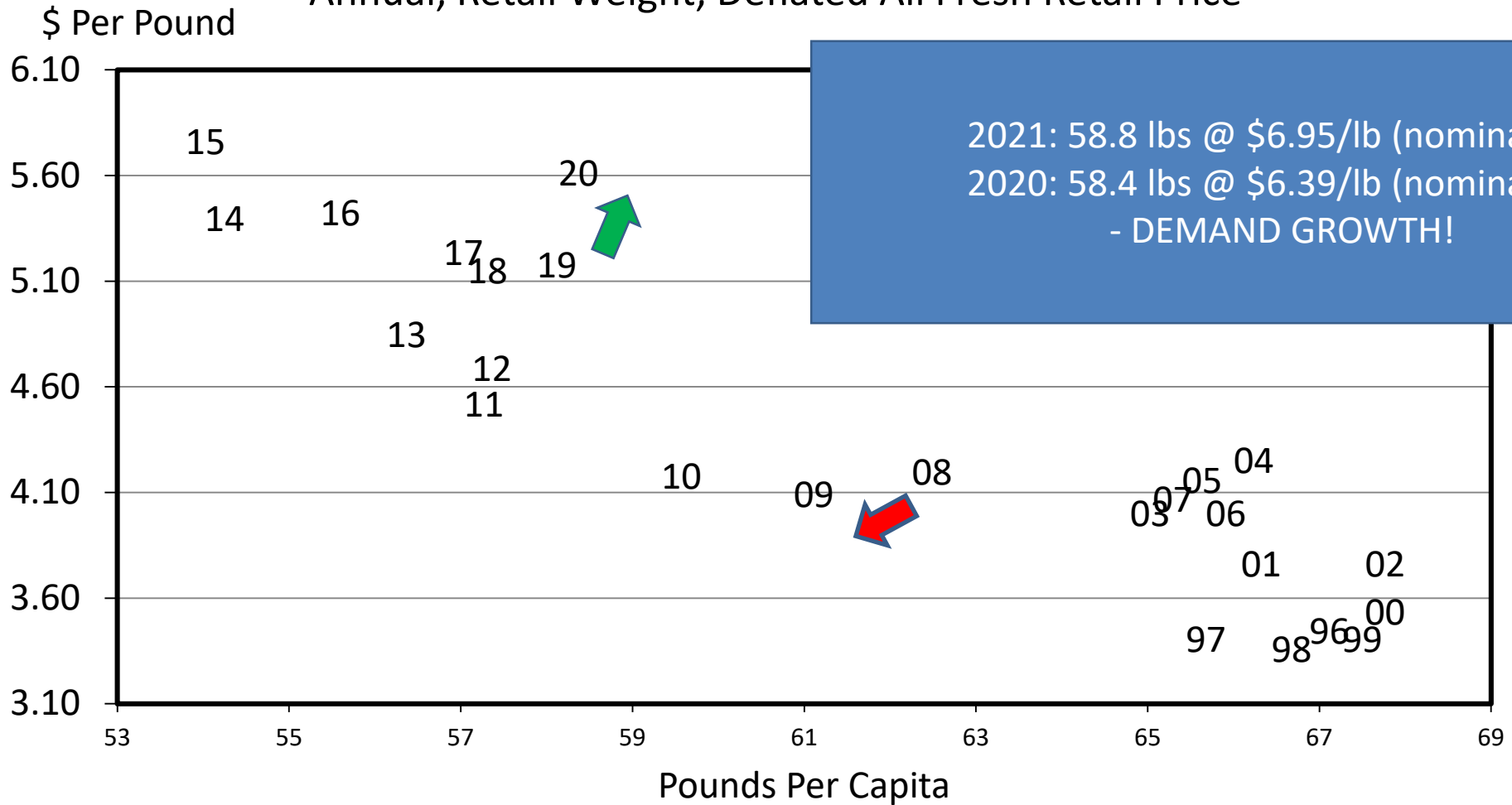
BEEF PRICE-QUANTITY RELATIONSHIP

Annual, Retail Weight, Deflated All Fresh Retail Price



BEEF PRICE-QUANTITY RELATIONSHIP

Annual, Retail Weight, Deflated All Fresh Retail Price



2021: 58.8 lbs @ \$6.95/lb (nominal AF)
 2020: 58.4 lbs @ \$6.39/lb (nominal AF)
 - DEMAND GROWTH!

How Does Domestic Demand Impact Producers?

1% increase in domestic demand =

➤ +2.30% live cattle & +3.50% feeder prices (McKendree et al., 2019)

■ **Q4.2017 Domestic Demand Index +2% (vs. Q4.2016)**

■ **Realized Prices:**

■ \$118 (live) & \$157 (feeder)

■ Without domestic demand increase, would have been:

■ \$112.57 (live) & \$146.02 (feeder)

■ **\$5.43/cwt & \$10.98/cwt price impacts**

Bottleneck Impact on Fed Cattle Prices was Reduced Due to Beef Demand Strength!

Kansas State University Department Of Agricultural Economics Extension Publication

04/04/2020

Assessing Impact of Packing Plant Utilization on Livestock Prices

Glynn Tonsor (gtonsor@ksu.edu) Kansas State University Department of Agricultural Economics

Lee Schulz (lschulz@iastate.edu) Iowa State University Department of Economics

“...if the industry operates at 20% lower capacity rates, then we may anticipate fed cattle prices to decline by 26.49%”

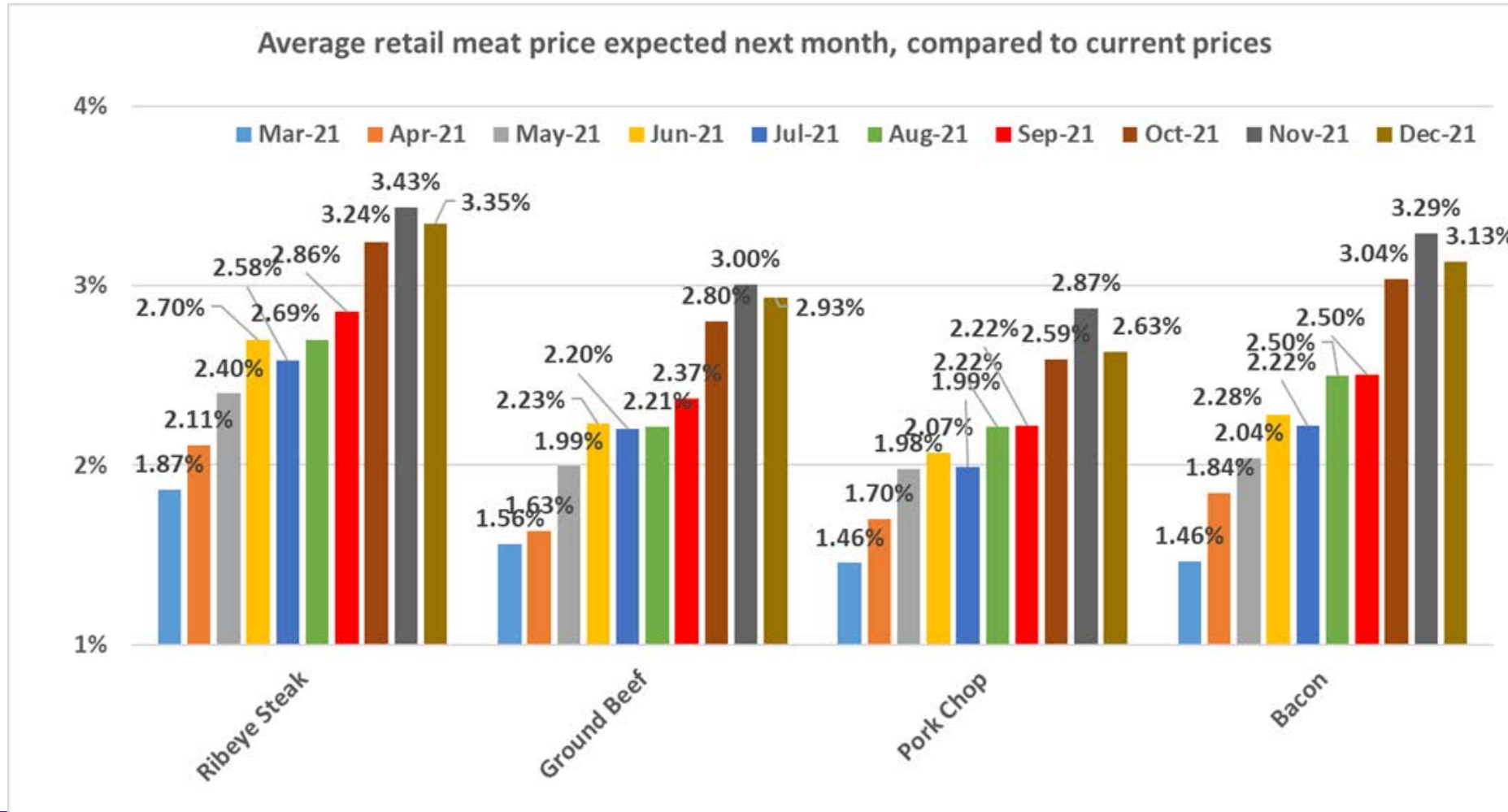
40% Yr-o-Yr Decline in Cattle Slaughter Occurred with LESS THAN a 23% price decline...

5-Mkt Live Prices (\$/cwt):

- 1/5/20: \$124 & 3/29/20: \$119
- 4/26/20: \$97 & 7/5/20: \$95

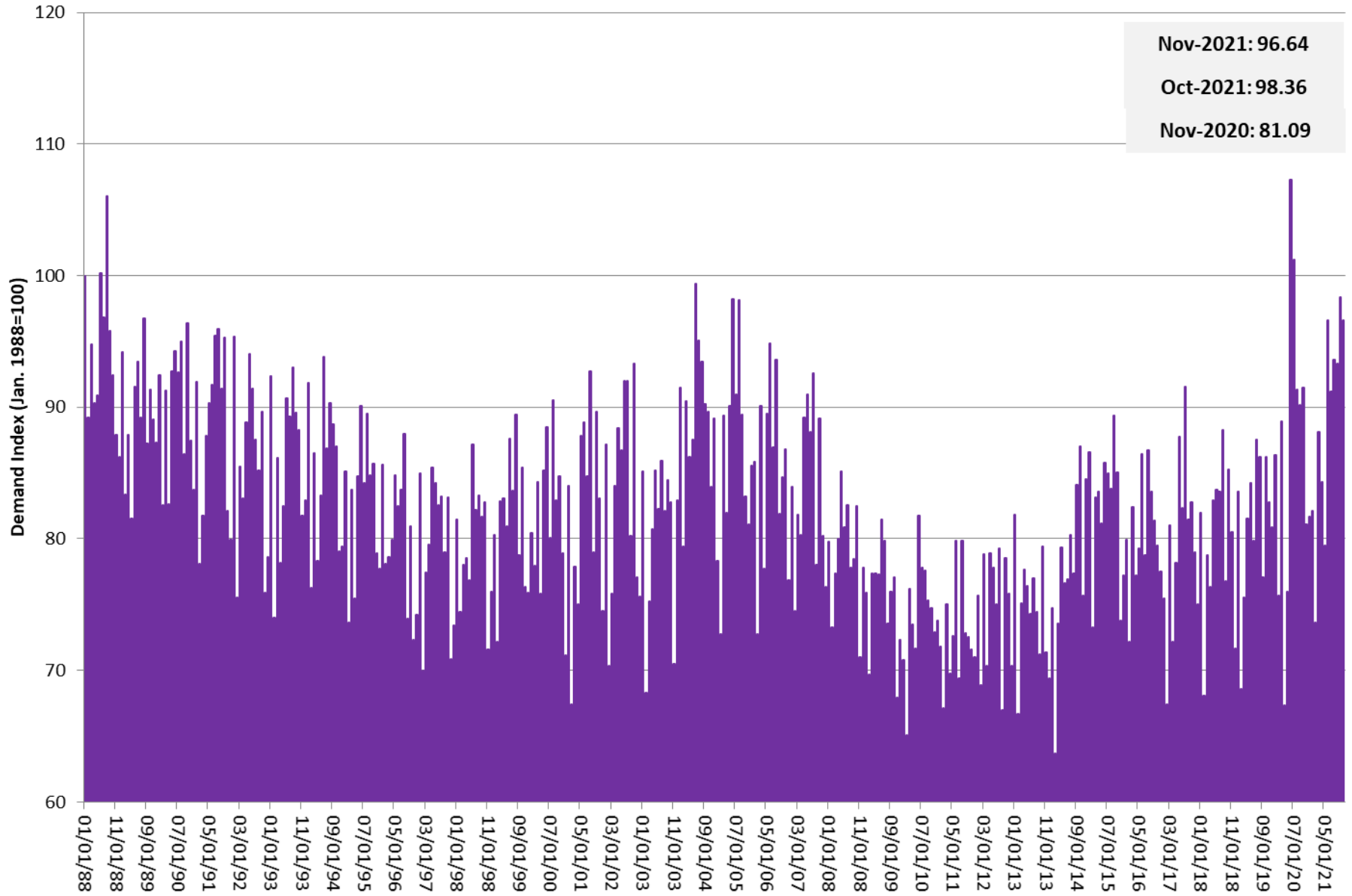
What Underlies “High Retail Meat Prices” ?

GT – Elevated Costs & Strong Demand!



Recent Beef Demand Patterns

Monthly Domestic, All-Fresh Retail Beef Demand Index, Jan. 1988-present



Source: Glynn T. Tonsor, Kansas State University



AgManager.info

<https://www.agmanager.info/livestock-meat/meat-demand/monthly-domestic-meat-demand-indices-usdabls-data>

KANSAS STATE UNIVERSITY Agricultural Economics

Monthly Meat Demand Monitor, Methods, and Supporting Information

Home / Livestock & Meat / Meat Demand / Monthly Meat Demand Monitor [Survey Data]

KANSAS STATE UNIVERSITY | Agricultural Economics

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[Projected Feeder Cattle Prices](#)

[Cattle Finishing Returns](#)

[Meat Demand](#)

[Meat Demand Research Studies](#)

[Monthly Domestic Meat Demand Indices \[USDA/BLS Data\]](#)

[Monthly Export Meat Demand Indices \[USDA/BLS Data\]](#)

[Monthly Meat Demand Monitor \[Survey Data\]](#)

Monthly Meat Demand Monitor [Survey Data]

Add to Favorites



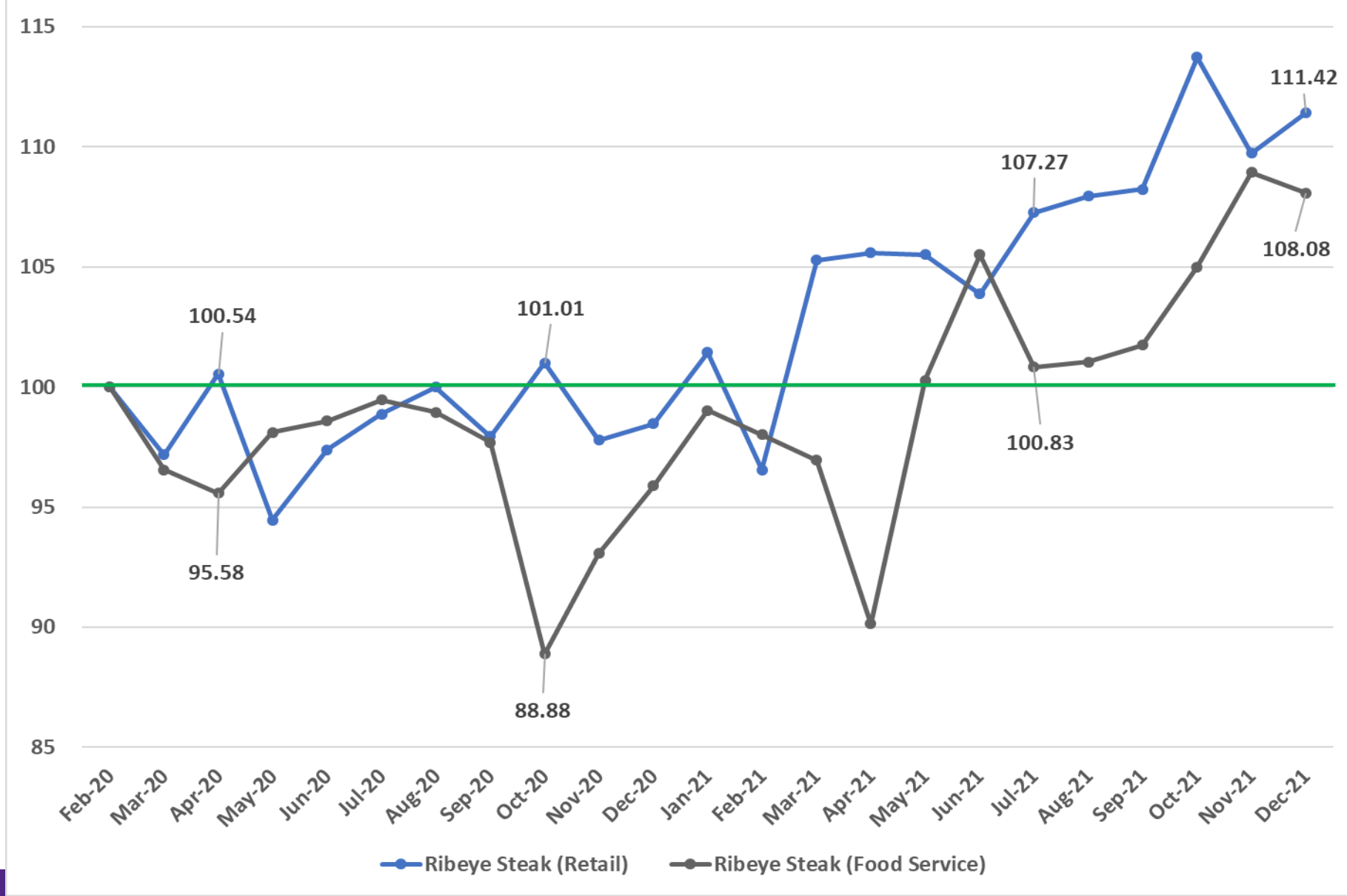
The Meat Demand Monitor (MDM) project is funded in-part by the beef checkoff and the pork checkoff. Monthly reports and supporting documentation are available here.



Monthly Meat Demand Monitor

Title	Author	Date	Downloads
Meat Demand Monitor - August 2020	Tonsor	September 4, 2020	Downloads
Meat Demand Monitor - July 2020	Tonsor	August 4, 2020	Downloads
Meat Demand Monitor - February-June 2020 Summary Report	Tonsor	July 27, 2020	Downloads
Meat Demand Monitor - June 2020	Tonsor	July 2, 2020	Downloads
Meat Demand Monitor - May 2020	Tonsor	May 29, 2020	Downloads
Meat Demand Monitor - Coronavirus (COVID-19) Impact on U.S. Meat Demand:	Tonsor	May 12, 2020	Downloads

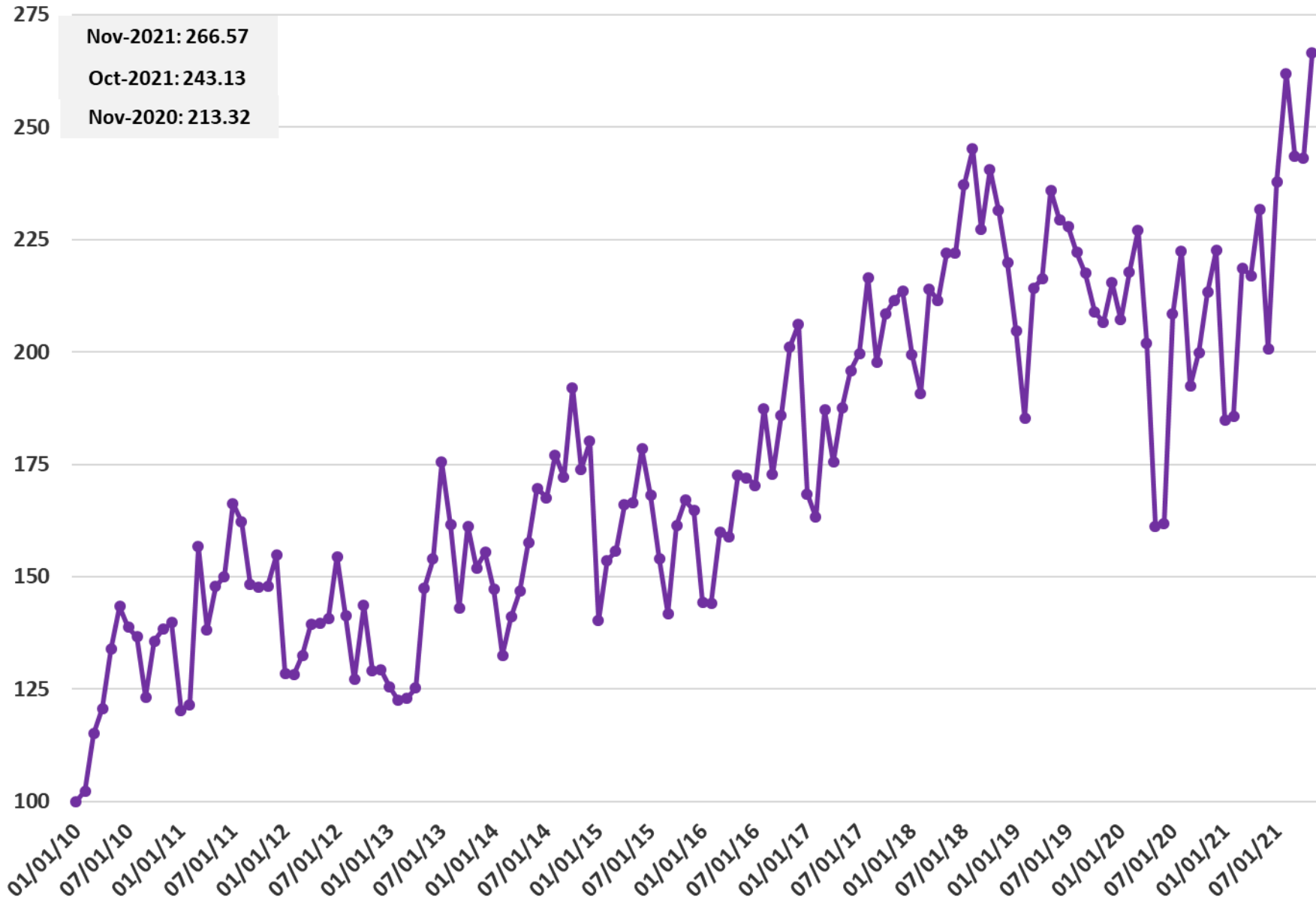
Master WTP Indices (Feb 20' = 100), Ribeye Steak



Master WTP Indices (Feb 20' = 100), Ground Beef/Hamburger Meal Offerings

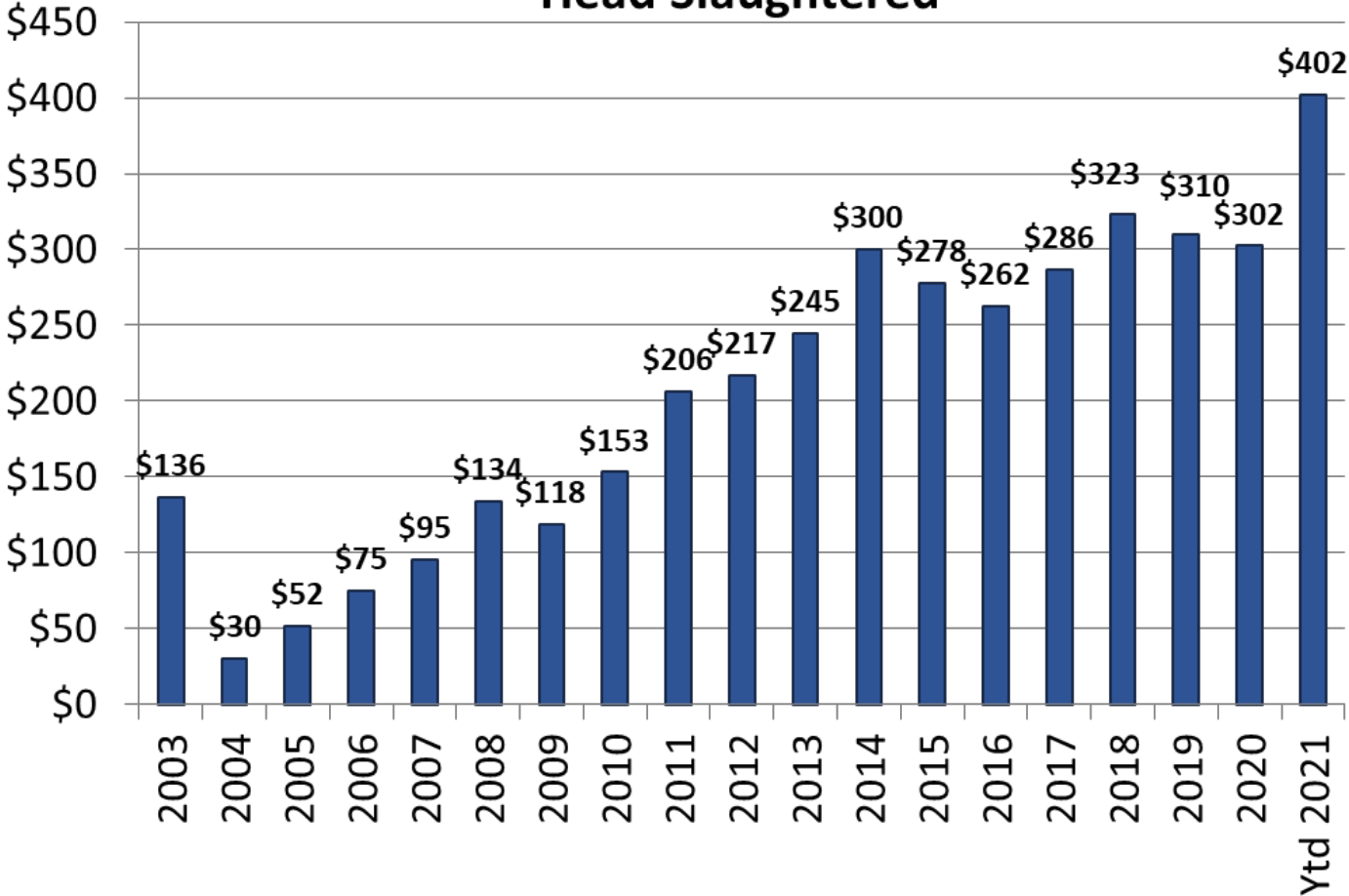


Monthly U.S. Beef, Export Demand Index, Jan. 2010 (base) - present



Export Demand Strength – Aligns with USMEF #s

Beef & Beef Variety Meat Export Value Per Fed Head Slaughtered

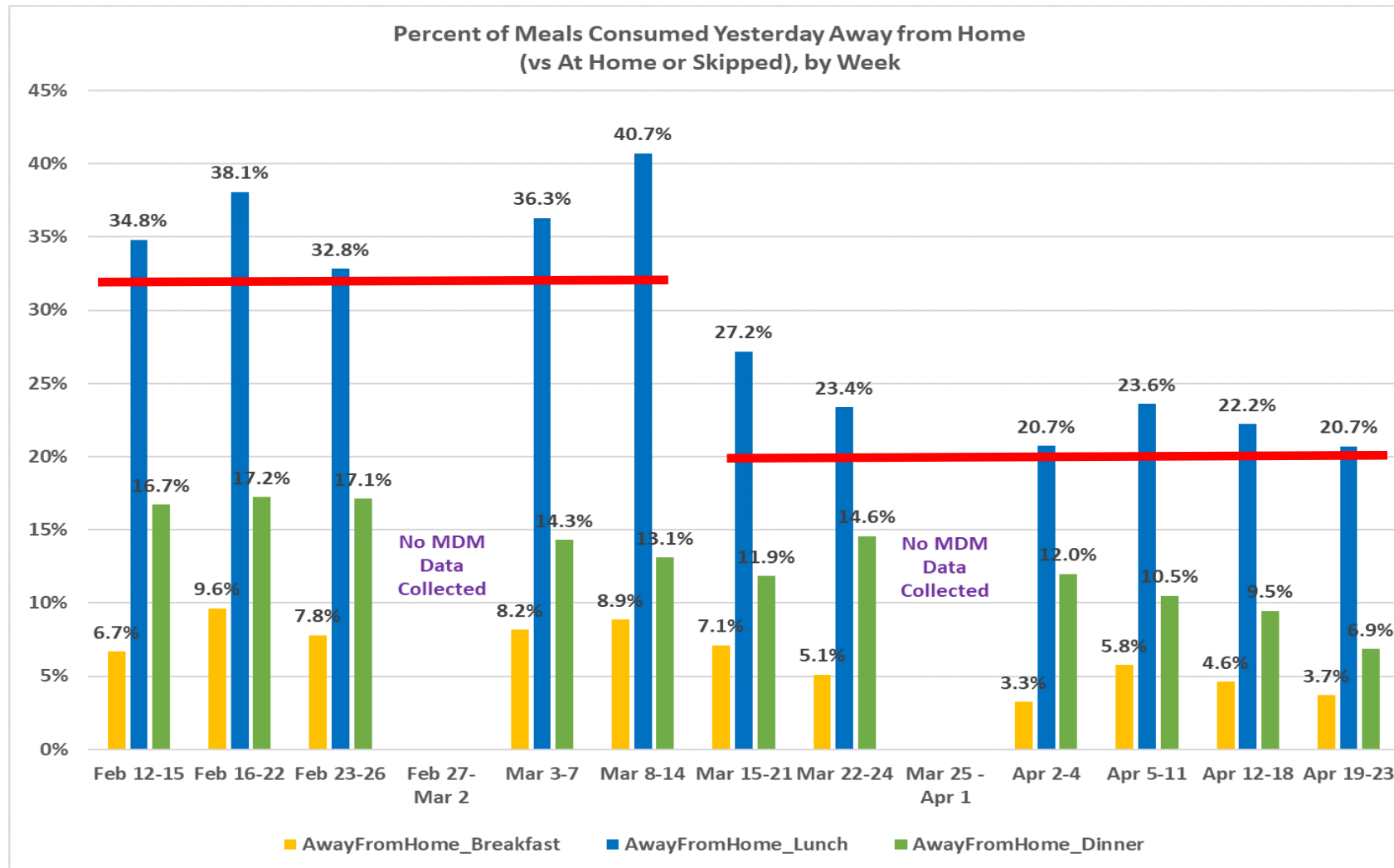


GT: \$402/hd = ~22% of Fed Cattle Value in 2021

3 LARGE COVID-19 SHOCKS

**Each Had/Have Demand
Impacts...**

SHOCK #1: Shift to At-Home



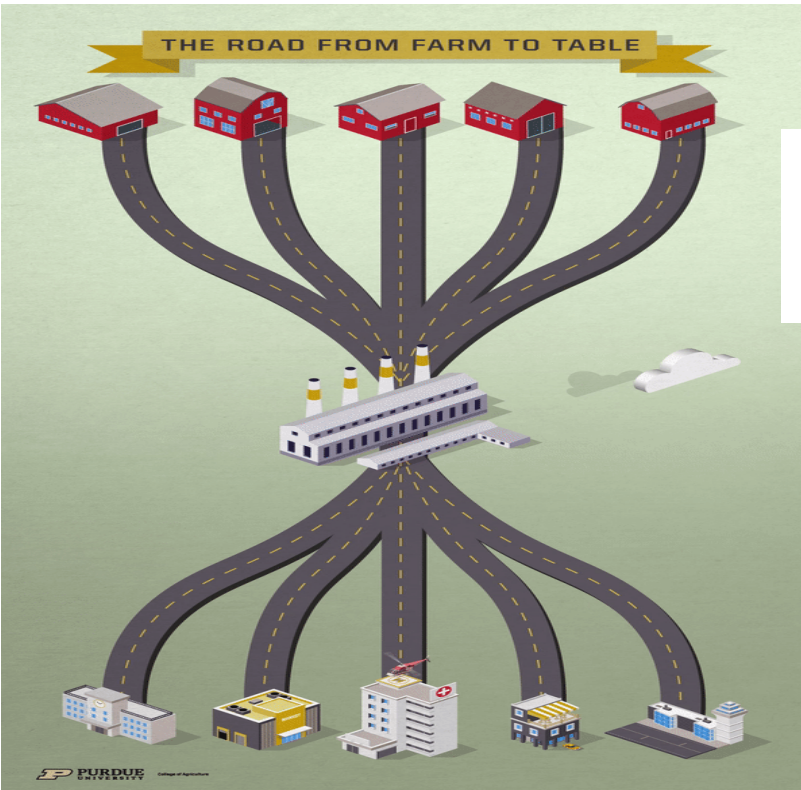
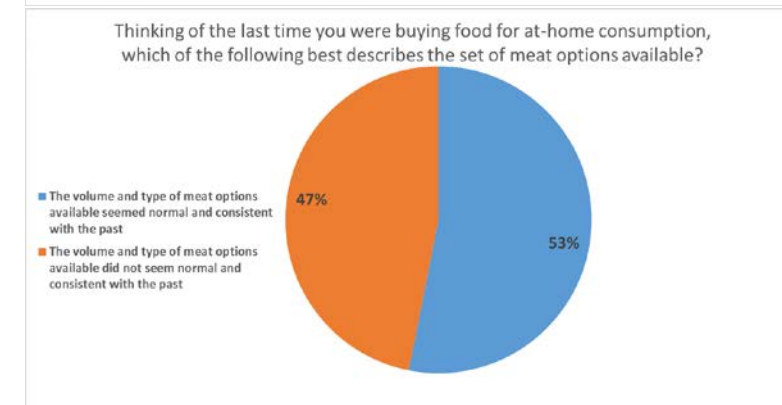
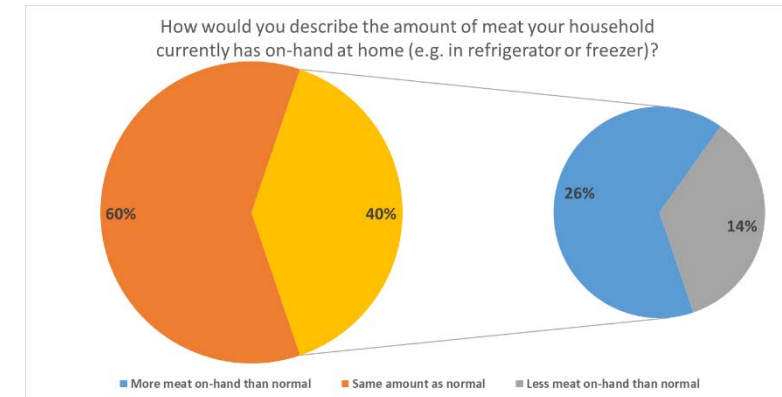
SHOCK #2:

Animal-to-Meat Bottleneck in April-May Societal Calls: *Where's my Meat?*

TIME

COVID-19 Meat Shortages Could Last for Months. Here's What to Know Before Your Next Grocery Shopping Trip

<https://time.com/5830178/meat-shortages-coronavirus/>



<https://www.purdue.edu/newsroom/releases/2020/Q2/questions-and-answers-about-the-road-from-farm-to-table.html>



Meat shortages as virus forces plants to close

The effects of the coronavirus pandemic continue to ripple through the food industry. Dean Reynolds reports.

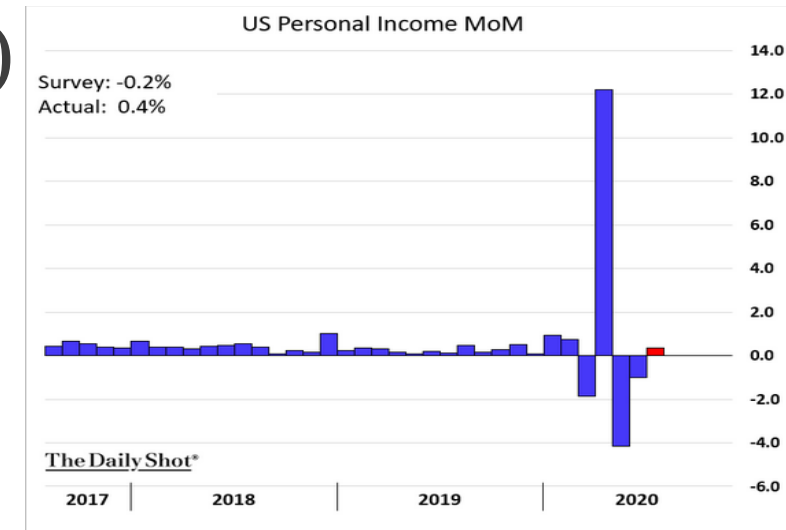
MAY 5, 2020

<https://www.cbsnews.com/video/meat-shortages-as-virus-forces-plants-to-close/>

<https://www.agmanager.info/livestock-meat/meat-demand/monthly-meat-demand-monitor-survey-data/meat-demand-monitor-coronavirus>

SHOCK #3 Consumer Meat Demand

- Recession
 - Weaker Meat Demand (**typically** at least)
- Stimulus & Spending
 - Supports Demand (April 20' incomes were up!)



INSIGHTS FROM PAST DEMAND WORK

Assessing Beef Demand Determinants

Glynn T. Tonsor, Jayson L. Lusk, and Ted C. Schroeder

Joint Evaluation Advisory Committee Meeting
January 31, 2018

[https://www.beefboard.org/news/files/FY2018/
Assessing%20Beef%20Demand%20Determinants_FullReport.pdf](https://www.beefboard.org/news/files/FY2018/Assessing%20Beef%20Demand%20Determinants_FullReport.pdf)

Presentation at 2018 Cattle Industry Convention
Phoenix, AZ



Main Unifying Themes / Recommendations

- ❑ Meat prices have become less important while consumer income has become more important**
 - Elevates importance of beef quality focus**

- ❑ Beef demand has increased or been stable over the past 5 years depending on measurement approach**
 - Good news given volume of “negative media”**

- ❑ Different methods offer unique insights into beef demand consistent with realities of available data**
 - Encourage use of multiple information sources**

Main Unifying Themes / Recommendations

- ❑ “Hot topics” change notably over time**
 - Impact on beef demand can substantially change**
 - Don’t over-react at expense of loyal beef customers**

- ❑ Several drivers of steak and ground beef demand differ**
 - Target marketing by beef product type and household type is encouraged**

- ❑ Examples of demand concepts being confused continue to exist**
 - Ongoing support of education on demand concepts and economic value to producers is encouraged**

Assessing Beef Demand Determinants (Jan. 18, 2018)

Glynn T. Tonsor, Jayson L. Lusk, and Ted C. Schroeder

Cattlemen's Beef Board



CATTLE INDUSTRY CONVENTION & NCBA TRADE SHOW
JANUARY 31-FEBRUARY 2, 2018

https://www.beefboard.org/news/files/FY2018/Assessing%20Beef%20Demand%20Determinants_FullReport.pdf



*Impacts of New
Plant-Based Protein
Alternatives on
U.S. Beef Demand*

Dr. Glynn Tonsor, Kansas State University
Dr. Jayson Lusk, Purdue University
Dr. Ted Schroeder, Kansas State University

<https://www.agmanager.info/livestock-meat/meat-demand/meat-demand-research-studies/impact-new-plant-based-protein-0>

RECOMMENDATIONS

1) Alternative Diet Consumers = Opportunity

- Plant-based purchases often made with beef or chicken
- Seeks ways to attract Flexitarians

2) Seek Supply-Side Gains to Enhance Beef's Competitiveness

- Beef's own-price has much larger impact than plant-based price

3) Sustain valued attributes: Taste, Safety, Nutrition, Iron, Protein

- Key to retaining current core consumers

RECOMMENDATIONS

4) Boost image around Fat, Cholesterol, Fiber

- May alter consumer perceptions currently favoring plant-based

5) Sustain focus on chicken industry & beef demand impacts

- Chicken breast prices much more influential than plant-based

6) Monitor plant-based changes in Price, Taste, and Appearance

- Key attributes that may impact substitution for beef

7) Prioritize market size and overall profits rather than market share

More information available at:



This presentation will be available in PDF format at:

<http://www.agmanager.info/about/contributors/individual/tonsor.asp>

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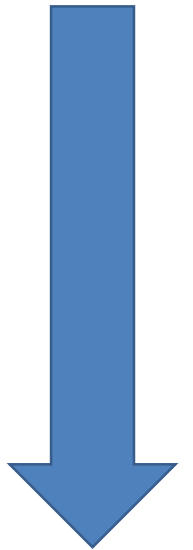
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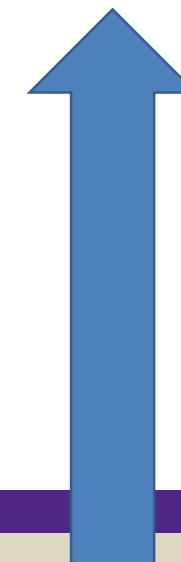
Quarterly Forecasts (LMIC: 1/24/22)

Year Quarter	Comm'l Slaughter	% Chg. from Year Ago	Average Dressed Weight	% Chg. from Year Ago	Comm'l Beef Production	% Chg. from Year Ago
2021						
I	8,274	-1.5	833.4	1.0	6,895	-0.5
II	8,502	14.9	818.3	-0.1	6,957	14.8
III	8,526	-0.2	818.5	-1.7	6,978	-1.9
IV	8,536	1.1	832.7	-0.5	7,108	0.5
Year	33,837	3.2	825.7	-0.4	27,937	2.8
2022						
I	8,044	-2.8	836.3	0.4	6,727	-2.4
II	8,247	-3.0	822.1	0.5	6,780	-2.5
III	8,222	-3.6	822.3	0.5	6,761	-3.1
IV	8,312	-2.6	837.7	0.6	6,963	-2.0
Year	32,826	-3.0	829.6	0.5	27,232	-2.5
2023						
I	7,739	-3.8	844.9	1.0	6,538	-2.8
II	8,076	-2.1	829.5	0.9	6,699	-1.2
III	7,995	-2.8	829.7	0.9	6,634	-1.9
IV	8,129	-2.2	846.0	1.0	6,877	-1.2
Year	31,939	-2.7	837.5	1.0	26,748	-1.8



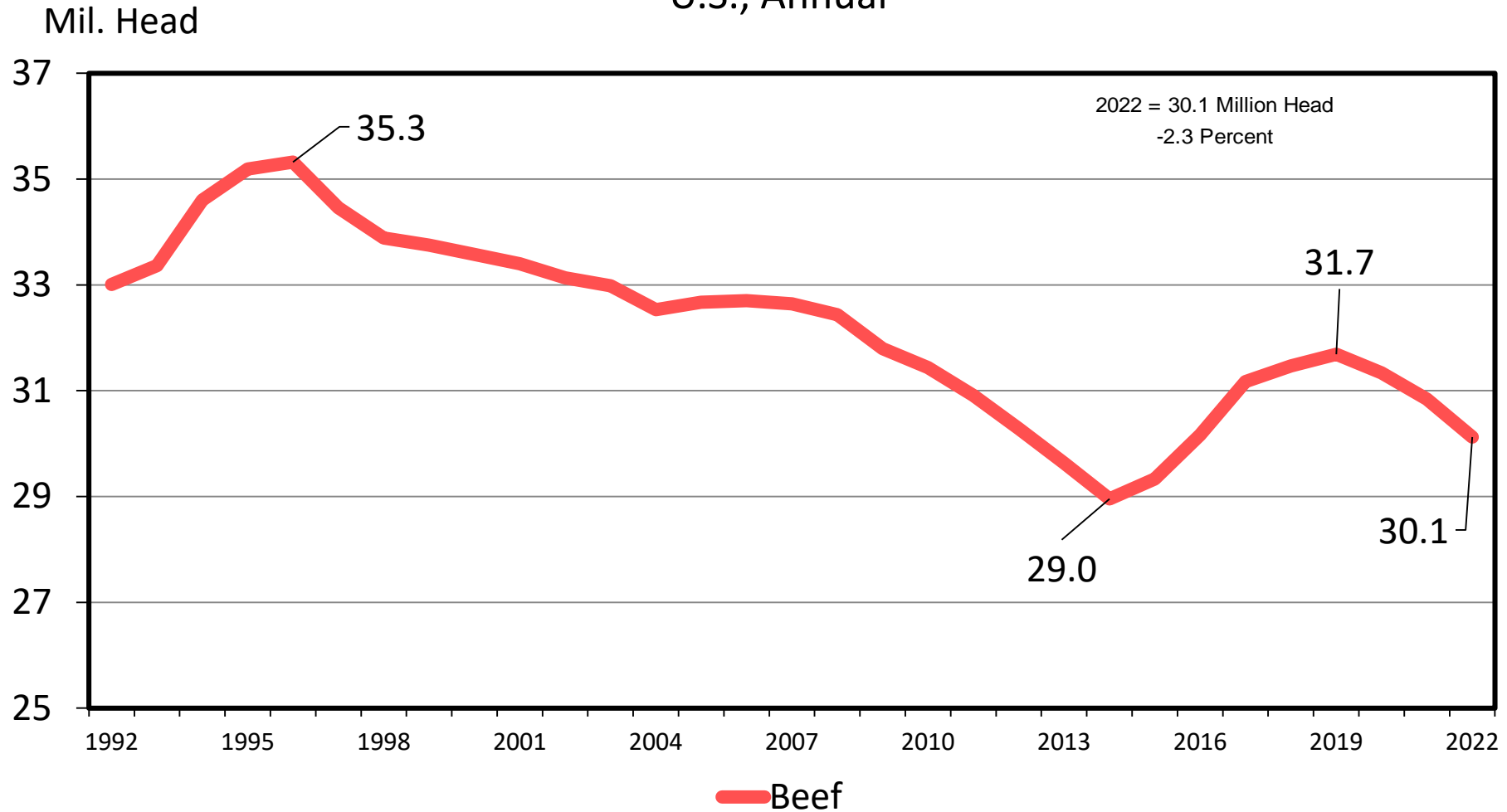
Quarterly Forecasts: Cattle (LMIC: 1/24/22)

Year Quarter	Live Sltr.	% Chg.	Feeder Steer Price	
	Steer Price	from	Southern Plains	
	5-Mkt Avg	Year Ago	7-800#	5-600#
2021				
I	112.98	-4.5	136.65	164.83
II	120.76	14.1	142.02	165.42
III	124	21.4	156	172
IV	132	21.6	159	172
Year	122	12.0	148	169
2022				
I	132-135	18.2	161-162	183-186
II	135-139	13.5	158-162	182-186
III	126-131	4.0	163-173	180-190
IV	130-136	0.5	158-168	178-188
Year	132-134	8.7	163-165	184-185
2023				
I	137-147	6.4	165-175	185-195
II	140-150	3.6	168-178	188-198
III	130-145	7.0	172-187	199-214
IV	135-150	7.1	177-192	205-220
Year	139-144	6.4	172-182	195-205



JANUARY 1 COW INVENTORY

U.S., Annual



AgManager

Data Source: USDA-NASS

Livestock Marketing Information Center

KANSAS STATE UNIVERSITY
C-N-02
01/31/22

Agricultural Economics

Seek Long-Term Forecasts of Meat Industry Volumes (for grain demand and related insights)???

See USDA 10-Year Forecasts:

- <https://www.usda.gov/media/press-releases/2021/10/26/usda-announces-early-release-select-commodity-tables-agricultural>

USDA Projections to 2031: Beef-cattle

Item	Units	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031
Commercial production	Million lbs.	27,174	27,832	26,995	26,672	26,777	26,964	27,193	27,410	27,645	27,874	28,097	28,314
Change from previous year	Percent	0.0	2.4	-3.0	-1.2	0.4	0.7	0.9	0.8	0.9	0.8	0.8	0.8
Imports	Million lbs.	3,342	3,187	3,165	3,211	3,222	3,163	3,113	3,137	3,162	3,186	3,210	3,234
Exports	Million lbs.	2,951	3,414	3,270	3,201	3,213	3,249	3,290	3,330	3,373	3,415	3,456	3,497
Total disappearance	Million lbs.	27,561	27,750	26,960	26,757	26,851	26,923	27,071	27,276	27,494	27,706	27,916	28,121
Per capita, retail weight	Pounds	58.4	58.6	56.8	55.8	55.6	55.4	55.3	55.3	55.4	55.4	55.4	55.5
Change from previous year	Percent	1.0	0.3	-3.2	-1.6	-0.4	-0.4	-0.2	0.0	0.1	0.1	0.1	0.0
Prices:													
Beef cattle, farm	\$/cwt 1/	108.84	119.84	127.44	133.56	134.10	135.84	136.33	136.68	137.25	138.21	139.42	141.10
Calves, farm	\$/cwt	157.25	167.32	180.01	188.66	189.42	191.88	192.57	193.06	193.87	195.23	196.95	199.31
Steers, 5-area	\$/cwt	108.51	121.06	128.75	134.94	135.48	137.24	137.73	138.08	138.66	139.63	140.86	142.55
Feeder steers, Oklahoma City	\$/cwt	135.45	144.80	155.50	171.19	171.80	174.39	174.91	175.14	175.76	177.06	178.83	181.41
Beef cow inventory	1,000 head	31,339	31,158	30,555	30,534	30,596	30,663	30,797	30,946	31,091	31,227	31,350	31,460

Note: Totals may not add due to rounding. 1/ Cwt = hundredweight (100 pounds). The projections were completed in October 2021.



USDA Projections to 2031: Pork-hogs

Table 20: Pork long-term projections

Item	Units	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031
Commercial production	Million lbs.	28,303	27,674	27,585	28,367	28,394	28,509	28,905	29,269	29,657	29,976	30,286	30,603
Change from previous year	Percent	2.4	-2.2	-0.3	2.8	0.1	0.4	1.4	1.3	1.3	1.1	1.0	1.0
Imports	Million lbs.	904	1,107	1,145	954	959	964	969	974	979	983	988	993
Exports	Million lbs.	7,280	7,199	7,405	7,400	7,425	7,498	7,554	7,611	7,668	7,726	7,784	7,840
Total disappearance	Million lbs.	22,121	21,605	21,295	21,822	21,932	21,979	22,323	22,636	22,972	23,238	23,505	23,770
Per capita, retail weight	Pounds	50.6	49.7	49.6	50.5	50.4	50.1	50.5	50.9	51.3	51.5	51.7	52.0
Change from previous year	Percent	0.0	-1.8	-0.2	1.7	-0.2	-0.5	0.8	0.7	0.8	0.5	0.5	0.4
Prices:													
National base, live equivalent	\$/cwt	43.18	69.45	60.50	58.64	55.31	52.97	49.57	46.80	45.54	45.45	46.06	47.37
Hog inventory,													
December 1, previous year	1,000 head	78,228	76,822	74,750	77,500	77,484	77,554	78,383	79,122	79,922	80,531	81,111	81,705

Note: Totals may not add due to rounding. 1/ Cwt = hundredweight (100 pounds). The projections were completed in October 2021.

USDA Projections to 2031: Chicken

Table 21: Young chicken long-term projections

Item	Units	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031
Federally inspected slaughter	Million lbs.	44,583	44,724	45,240	46,546	47,195	47,805	48,213	48,849	49,275	49,711	50,382	51,020
Change from previous year	Percent	1.5	0.3	1.2	2.9	1.4	1.3	0.9	1.3	0.9	0.9	1.4	1.3
Exports	Million lbs.	7,367	7,491	7,410	7,599	7,730	7,858	7,987	8,116	8,245	8,374	8,503	8,653
Disappearance	Million lbs.	36,991	36,974	37,476	38,498	39,014	39,579	39,860	40,362	40,659	40,964	41,503	41,991
Per capita, retail weight	Pounds	96.2	95.8	96.8	98.6	99.2	99.9	99.9	100.4	100.5	100.5	101.1	101.6
Change from previous year	Percent	1.2	-0.4	1.0	1.8	0.6	0.7	0.0	0.5	0.0	0.1	0.6	0.5
Prices:													
Broilers, National composite	Cents/lb.	73.2	98.4	98.3	98.8	101.3	102.4	103.5	103.4	103.9	104.6	105.1	106.5

Note: Totals may not add due to rounding. 1/ Broiler feed price based on 58 percent corn price and 42 percent soybean price, as used by USDA, National Agricultural Statistics Service. The projections were completed in October 2021.