BEEF-CATTLE OUTLOOK

2020 RISK & PROFIT CONFERENCE

Economics of Agriculture During the COVID-19 Pandemic:
An Ongoing Discussion

August 10-14, 2020

ONLINE

See schedule below.

Details

- Daily sessions, beginning August 10.
- Two sessions daily on Monday, Tuesday, Wednesday, Friday from 12:00—1:30 pm
- Four sessions on Thursday, starting at 10:30
- · All sessions recorded and available later
- Registration=\$30. Includes all live sessions, plus exclusive access to recordings and slides.

AgManager

DR. GLYNN T. TONSOR EMAIL: GTONSOR@KSU.EDU TWITTER: @TONSORGLYNN

KANSAS STATE

3 LARGE & (partially?) ONGOING COVID-19 SHOCKS



Stay-at-Home Orders

When State Stay-at-Home Orders Due to Coronavirus Went into Effect



SOURCE: KFF, State Data and Policy Actions to Address Coronavirus. sue-brief/state-data-and-policy-actions-to-address-coronavirus/#note-3-10 and state government websites



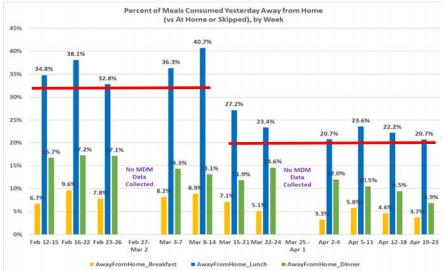


AgManager https://www.kff.org/other/slide/when-state-stay-at-home-orders-due-to-coronavirus-went-into-offect/ due-to-coronavirus-went-into-effect/

KANSAS STATE UNIVERSITY

Agricultural Economics

SHOCK #1: Shift to At-Home: Mid-March thru April





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

KANSAS STATE | Agricultural Economics UNIVERSITY

Beef & Pork Packing Challenges Develop





https://static1.squarespace.com/static/502c267524aca01df475f9ec KANSAS STATE /t/5f33fb8996534b02af31fa86/1597242250084/Marketing+Margin UNIVERSITY s+during+COVID19+revised+2.ndf

Agricultural Economics

SHOCK #2:

Animal-t0-Meat Bottleneck in April-May Societal Calls: Where's my Meat?



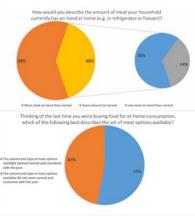
 $\frac{https://www.purdue.edu/newsroom/releases/2020/Q2/questions-and-answers-about-the-road-from-farm-to-table.html}{}$

TIME

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



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



https://www.agmanager.info/livestock-meat/meat-demand/monthlymeat-demand-monitor-survey-data/meat-demand-monitorcoronavirus



KANSAS STATE | Agricultural Economics UNIVERSITY

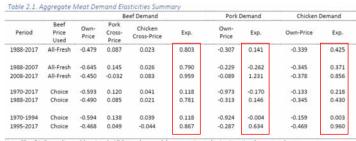
Consumer Demand Response

- •Recession = Weaker Demand (typically)
- Stimulus = Supports Demand
- •Growing Importance of At-Home Supplies = Supports Demand





SHOCK #3? Will Meat Demand Weaken? / TBD!



Assessing Beef Demand Determinants Prepared for the Cattlemen's Beef Board Glynn T. Tonsor, Kansas State University (gtonsor@ksu.edu) Jayson L. Lusk, Purdue University (<u>Jayson Jusk@email.com</u>) and Ted C. Schroeder, Kansas State University (toulikau, edu)

January 18, 2018

https://www.agmanager. info/livestockmeat/meatdemand/past-meatdemand-researchstudies

Note: "Exp." is Expenditure abbreviated. All Rotterdam models were estimated using iterative three-stage least squares.





| RETAIL | | Ribeye Steak | Ground Beef | Pork Chop | Bacon | Chicken Breast | Plant-Based Patty | Shrimp | Beans and Rice | Something Else |
|---|---------------------------|-------------------|-----------------------------|-----------------------------|-----------------------------------|------------------------------------|----------------------------|----------------------------|----------------------------|-------------------|
| Finances will be Worse in 1 Year Finances will NOT be Worse in 1 Year | Market Share 6.4 | | \$ 6.80 24.0% \$ 7.96 | \$ 5.31 11.6% \$ 6.60 | \$ 4.36 6.9% \$ 5.25 | \$ 6.57 26.4% \$ 7.85 | \$ 8.63 3.1% \$ 8.12 | \$ 8.56 4.3% \$ 9.10 | \$ 1.90 7.0% \$ 2.75 | 10.4% |
| | Market Share | 7.3% | 23.3% | 13.2% | 7.5% | 26.2% | 2.5% | 4.5% | 7.5% | 8.1% |
| FOOD SERVICE | | Ribeye Steak | Beef Hamburger | Pork Chop | Baby Back Ribs | 1.00 | Plant-Based Patty | Shrimp | Salmon | Something Else |
| Finances will be Worse in 1 Year | WTP (\$/lb) Market Share | \$ 20.92 | \$ 15.20 24.1% | \$12.45 | \$ 14.37 9.0% | \$ 13.86 14.2% | \$ 7.29 2.0% | \$ 14.39 14.3% | \$16.53 10.5% | 11.6% |
| Finances will NOT be Worse in 1 Year | WTP (\$/lb) Market Share | \$ 25.94 15.3% | \$ 18.48 21.9% | \$13.97 4.2% | \$ 18.00 11.0% | \$ 17.07 14.4% | \$ 12.80 4.8% | \$ 17.34 13.8% | \$17.38 7.6% | 7.1% |



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

KANSAS STATE | Agricultural Economics

Market Implications SHOCK #1: Shift to At-Home: Mid-March thru April

- "Not all meat is equal"
 - •Weeks of beef round>loin
- ✓ GT #1: Need to better appreciate differences in ground & muscle product demand
- ✓ GT #2: Market channel differences underlie AGGREGATE data/info



KANSAS STATE
UNIVERSITY
Agricultural Economics

Market Implications SHOCK #2: Animal-t0-Meat Bottleneck

- Surplus of animals & "shortage" of meat
 - Elevated SOCIETAL interest
- Bottleneck = lower livestock prices & higher meat pricesTHIS IS WHAT ECONOMISTS EXPECT!!!
- ➤ Multiple, growing pushes on myriad of policies ✓ GT #1: Need to CAREFULLY balance <u>possible</u> gains in system robustness with peace-time efficiency
 - ✓GT #2: Assessment needed and any action based on data/info, <u>not</u> emotion



KANSAS STATE
UNIVERSITY
Agricultural Economics

Market Implications SHOCK #3: Will Meat Demand Weaken?

- ➤ Weaker demand = less \$ for industry and ultimately smaller livestock and meat production
 - ✓ GT #1: Ongoing mis-understanding of demand is problematic
 - ✓ GT #2: Recognition of US comparative advantages, growing role of exports, and "fit" with policy and industry strategy must improve
 - ❖ Homework Assignment: Google "Smoot-Hawley Tariff Act of 1930"



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

KANSAS STATE

Updated Outlook Situation



KANSAS STATE

Fed Cattle Flows – April 28th

Week ending May 2 = 425k FI

May 1st: 510k that "should" have been marketed in April?

Kansas State University Department Of Agricultural Economics Extension Publication

04/28/2020

Fed Cattle Flows: Demonstrative Scenario Examples

Glynn Tonsor (<u>atonsor@ksu.edu</u>) Kansas State University Department of Agricultural Economics Lee Schulz (<u>lschulz@iastate.edu</u>) Iowa State University Department of Economics

| Demonstrative Possible June 1st, Fed Cattle Overflow Situations (1,000 hd) | | | | | |
|--|--|----------|--|--|--|
| | Scenario Description | Overflow | | | |
| Scenario 1 | 450k constant week-ending 5/2 to 5/30 | 1,219 | | | |
| Scenario 2 | 425k constant week-ending 5/2 to 5/30 | 1,344 | | | |
| Scenario 3 | 450k constant week-ending 5/2 to week-ending 5/9 and then 500k to 5/30 | 1,069 | | | |
| Scenario 4 | 425k constant week-ending 5/2 to 5/9 and then 450k to 5/30 | 1,269 | | | |

Ultimately, did a bit better than Scenario 3



https://www.agmanager.info/livestock-meat/marketing-extension-bulletins/marketing-strategies-and-livestock-pricing/fed-cattle

KANSAS STATE
UNIVERSITY
Agricultural Economics

Fed Cattle Flows – July 31st

Presuming 625k/week FI slaughter (on average) thru end of August:

- Aug 1st "overflow" of ~849k head
- Sept 1st overflow of ~421k head
- Punchline: by Labor Day COULD be in much better situation

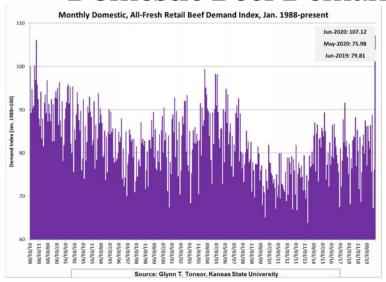
Main risks/unknowns

- 1. Can industry sustain "nearly full" FI volumes?
 - Drop by 25k/week = 100k more carryover one month later
- 2. Is there actually 20% of total feedlot inventory in small (<1k head) yards?





Domestic Beef Demand



- ✓ Apr & May: Weaker than 2019 (Restaurant Weakness > Retail Strength?)
 - ✓ June: Strong Recovery
- USDA may revise Retail prices 3 months later...



https://www.agmanager.info/livestock-meat/meatdemand/monthly-domestic-meat-demand-indicesusdabls-data KANSAS STATE
UNIVERSITY
Agricultural Economics

Domestic Beef Demand: Additional Retail Improvement in July?

KANSAS STATE

Department of
Agricultural Economics

MDM: Meat Demand Monitor

The MDM tracks U.S. consumer preferences, views, and demand for meat with separate analysis for retail and food service channels. MDM is a monthly online survey with a sample of over 2,000 respondents reflecting the national population.

Chicken Plant-Based Shrimp

Willingness to Pay & Projected Market Share

| | | Steak | Beef | Chop | | Breast | Patty | | and Rice | Else |
|--------|---------------|-----------------|---------------------|--------------|-------------------|-------------------|----------------------|---------|----------|-------------------|
| Jun-20 | WTP (\$/lb) | \$15.92 | \$7.41 | \$5.71 | \$4.50 | \$7.20 | \$7.52 | \$8.22 | \$1.98 | |
| | Market Share | 7% | 23% | 12% | 7% | 25% | 3% | 4% | 7% | 10% |
| Jul-20 | WTP (\$/lb) | \$16.17 | \$7.59 | \$6.38 | \$5.17 | \$7.48 | \$7.71 | \$8.80 | \$2.19 | |
| | Market Share | 7% | 23% | 14% | 8% | 27% | 2% | 4% | 7% | 9% |
| FOO | DD SERVICE | Ribeye Steak | Beef Ham- burger | Pork Chop | Baby Back Ribs | Chicken Breast | Plant-Based Patty | Shrimp | Salmon | Something Else |
| Jun-20 | WTP (\$/meal) | \$25.43 | \$18.69 | \$15.64 | \$18.35 | \$17.48 | \$12.63 | \$17.25 | \$18.14 | |
| | Market Share | 14% | 23% | 5% | 11% | 15% | 4% | 13% | 8% | 796 |
| Jul-20 | WTP (\$/meal) | \$25.65 | \$18.40 | \$14.41 | \$17.75 | \$17.30 | \$12.52 | \$17.48 | \$17.80 | |
| | M. L. CL. | 1000 | 220/ | *** | 1000 | 100/ | 701 | 2.407 | 007 | 707 |

MDM (July vs June)

✓ Retail: Ribeye & Ground up

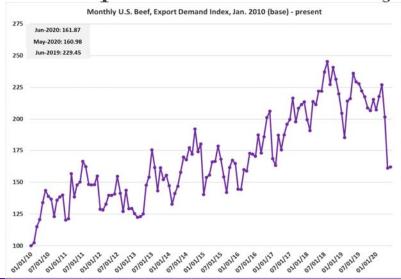
✓ FS: Ribeye up & Ground down



AgManager https://www.agmanager.info/livestock-meat/meat-demand/monthly-meat-demand-monitor-survey-data



Beef Export Demand Recovery Needed!



Points of Optimism ✓ Weaker USD recently,

✓ Stronger Asian econ (?), ✓ US FI volume recovery



AgManager https://www.agmanager.info/livestock-meat/meatdemand/monthly-export-meat-demand-indices-usdabls-data

KANSAS STATE | Agricultural Economics UNIVERSITY

Quarterly Forecasts (LMIC: 7/31/20)

| | | % Chg. | Average | % Chg. | Comm'l | % Chg. |
|---------|-----------|----------|---------|----------|------------|----------|
| Year | Comm'l | from | Dressed | from | Beef | from |
| Quarter | Slaughter | Year Ago | Weight | Year Ago | Production | Year Ago |
| 2019 | | | | | | |
| I | 7,935 | 0.7 | 808.3 | -1.5 | 6,414 | -0.8 |
| II | 8,576 | 1.8 | 794.8 | -0.4 | 6,817 | 1.4 |
| III | 8,542 | 2.2 | 810.5 | -0.6 | 6,923 | 1.5 |
| IV | 8,503 | 1.9 | 823.4 | 0.1 | 7,001 | 2.0 |
| Year | 33,555 | 1.7 | 809.2 | -0.6 | 27,155 | 1.1 |
| 2020 | | | | | | |
| ı | 8,399 | 5.9 | 825.0 | 2.1 | 6,929 | 8.0 |
| II | 7,393 | -13.8 | 818.9 | 3.0 | 6,054 | -11.2 |
| III | 8,786 | 2.9 | 835.7 | 3.1 | 7,342 | 6.1 |
| IV | 8,534 | 0.4 | 833.7 | 1.2 | 7,115 | 1.6 |
| Year | 33,112 | -1.3 | 828.7 | 2.4 | 27,440 | 1.1 |
| 2021 | | | | | | |
| I | 8,009 | -4.6 | 831.2 | 0.8 | 6,657 | -3.9 |
| II | 8,132 | 10.0 | 815.9 | -0.4 | 6,634 | 9.6 |
| III | 8,227 | -6.4 | 830.7 | -0.6 | 6,834 | -6.9 |
| IV | 8,095 | -5.1 | 842.1 | 1.0 | 6,817 | -4.2 |
| Year | 32,463 | -2.0 | 829.9 | 0.2 | 26,942 | -1.8 |

2020 Per Capita **Consumption:** +0.1%!!!

> Q1: +5.5% Q2: -8.8% Q3: +3.3% Q4: +0.5%

Trade continues to smoothing role: (compare Domestic **Production & Domestic** PC Cons by quarter)

Also see: https://www.agmanager.info/li vestock-meat/marketingextension-bulletins/trade-anddemand/overview-us-beef-

production-export



KANSAS STATE | Agricultural Economics UNIVERSITY

Quarterly Forecasts: Cattle (LMIC: 7/31/20)

| | Live Sltr. | % Chg. | Feeder Steer Price | | | | |
|---------|-------------|----------|--------------------|---------|--|--|--|
| Year | Steer Price | from | Southern | Plains | | | |
| Quarter | 5-Mkt Avg | Year Ago | 7-800# | 5-600# | | | |
| 2019 | | | | | | | |
| I | 125.27 | -0.3 | 142.87 | 171.41 | | | |
| II | 118.79 | 1.8 | 143.23 | 167.22 | | | |
| III | 108 | -2.4 | 144 | 157 | | | |
| IV | 115 | -0.4 | 148 | 158 | | | |
| Year | 117 | -0.3 | 145 | 163 | | | |
| 2020 | | | | | | | |
| I | 118.32 | -6.6 | 138.90 | 166.38 | | | |
| II | 105.79 | -11.2 | 129.45 | 152.55 | | | |
| III | 99-102 | -7.1 | 142-145 | 154-156 | | | |
| IV | 108-112 | -4.2 | 140-144 | 157-161 | | | |
| Year | 107-109 | -7.5 | 137-140 | 157-160 | | | |
| 2021 | | | | | | | |
| I | 113-118 | -2.4 | 140-145 | 163-168 | | | |
| II | 116-122 | 12.5 | 142-148 | 169-175 | | | |
| III | 114-121 | 16.9 | 151-161 | 165-175 | | | |
| IV | 117-125 | 10.0 | 153-163 | 166-176 | | | |
| Year | 117-120 | 9.7 | 148-152 | 167-171 | | | |



KANSAS STATE | Agricultural Economics

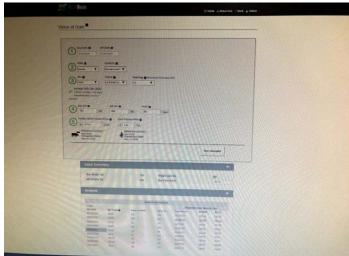
KS Feedlot Returns (cash-2-cash), as of August 11, 2020

Table 1. Projected Values for Finishing Steers in Kansas Feedyards*

| Closeout Mo-Yr | Net Return | FCOG** | Fed Price | Fed Futures | Fed Basis | Feeder Price | Breakeven FCOG** | Breakeven Fed Price | Breakeven Feeder Price |
|-------------------|------------|--------|-----------|-------------|-----------|--------------|---------------------|------------------------|---------------------------|
| Jul-20 | -302.33 | 81.33 | 95.37 | 100.76 | -5.39 | 143.61 | 37.74 | 116.09 | 104.12 |
| Aug-20 | -72.22 | 80.21 | 109.85 | 108.30 | 1.55 | 141.01 | 69.68 | 114.76 | 131.83 |
| Sep-20 | 50.40 | 79.12 | 108.55 | 108.30 | 0.25 | 124.98 | 86.45 | 105.10 | 131.52 |
| Oct-20 | 108.19 | 78.95 | 112.01 | 111.68 | 0.33 | 122.24 | 95.37 | 104.72 | 135.34 |
| Nov-20 | 69.18 | 79.28 | 112.32 | 111.68 | 0.64 | 128.25 | 89.26 | 107.79 | 136.54 |
| Dec-20 | 88.25 | 78.51 | 116.20 | 115.15 | 1.05 | 135.26 | 90.79 | 110.43 | 146.14 |
| Jan-21 | 50.67 | 77.84 | 115.43 | 115.15 | 0.28 | 137.30 | 85.17 | 112.08 | 143.44 |
| Feb-21 | 24.73 | 79.40 | 118.66 | 117.50 | 1.16 | 146.09 | 82.92 | 117.02 | 149.17 |
| Mar-21 | 44.38 | 79.31 | 121.30 | 117.50 | 3.80 | 148.20 | 85.64 | 118.36 | 153.68 |
| Apr-21 | -47.40 | 80.26 | 114.99 | 110.95 | 4.04 | 148.43 | 73.49 | 118.22 | 142.23 |



Feeder Cattle Price, Basis, & VOG Use BeefBasis.com



Salina Market, as of August 11th

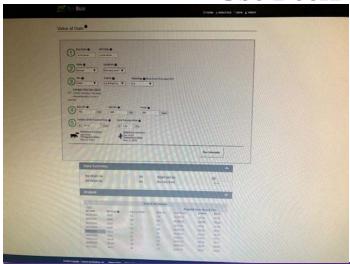
10/7 Sell @ 550 lbs

Expected Cash Price: \$169/cwt



KANSAS STATE
UNIVERSITY
Agricultural Economics

Feeder Cattle Price, Basis, & VOG Use BeefBasis.com



Salina Market, as of August 11th

10/7 Buy/Retain @ 550 lbs 1/13 Sell @ 725 lbs DOF=98 & ADG=1.8

Expected Buy Price: \$169/cwt
 Expected Sales Price: \$152/cwt

> VOG: \$95.40/cwt (\$167/hd)



KANSAS STATE | Agricultural Economics



More information available at:



This presentation will be available in PDF format at: http://www.agmanager.info/about/contributors/individual/tonsor.asp

Host of additional industry resources are cross-linked as well



