



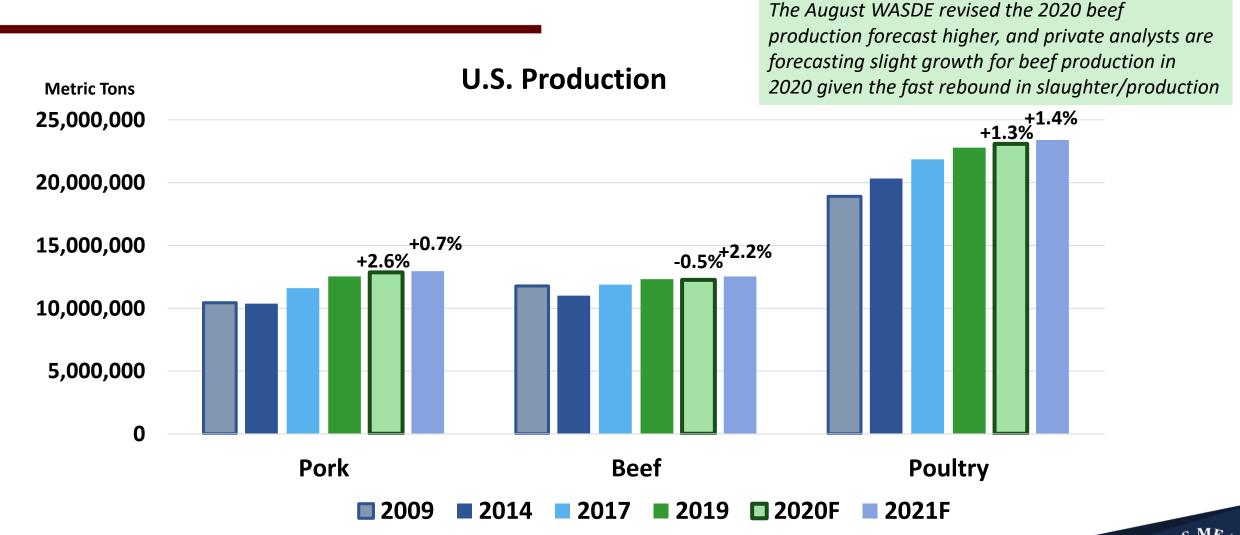
### **Total Protein Slides**

From Jessica Spreitzer, USMEF Economist



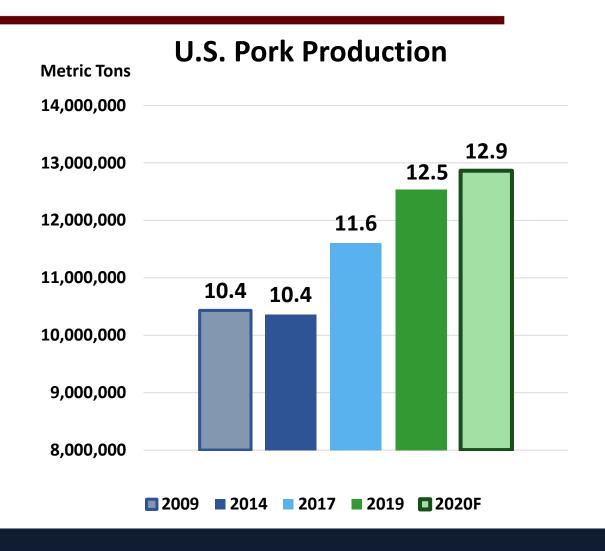


USDA forecasting record production for pork and poultry in 2020 and 2021, with 2020 beef production forecast down slightly from 2019's record





#### Significant growth in U.S. pork production over last 5 years



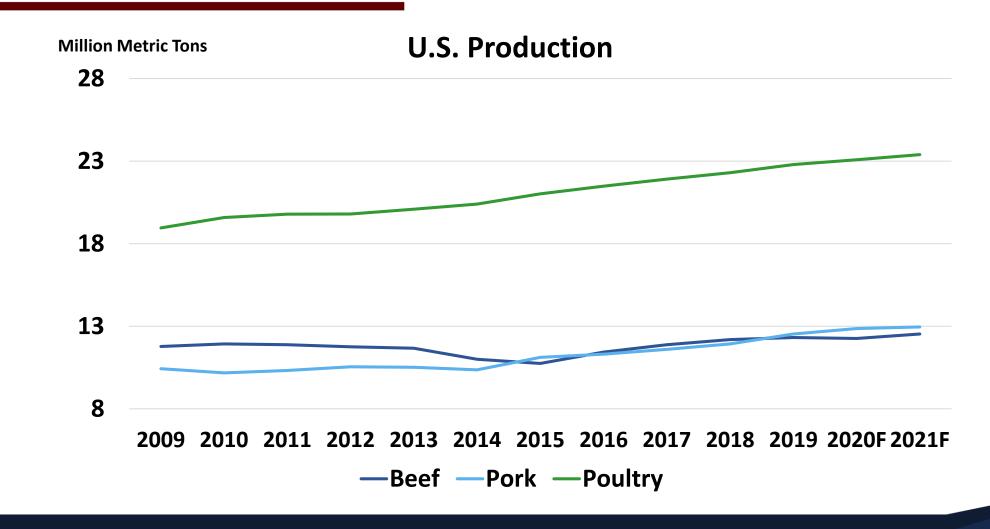
#### U.S. 2019 Pork Production:

- Up 21% or +2.17 mil mt (+4.79 billion pounds) from 2014
- Up 8% or +931,000 mt (+2.05 billion pounds) from 2017

From 2017 to 2019, the increase in U.S. pork production was roughly the size of annual UK pork production and larger than Taiwan's annual pork production

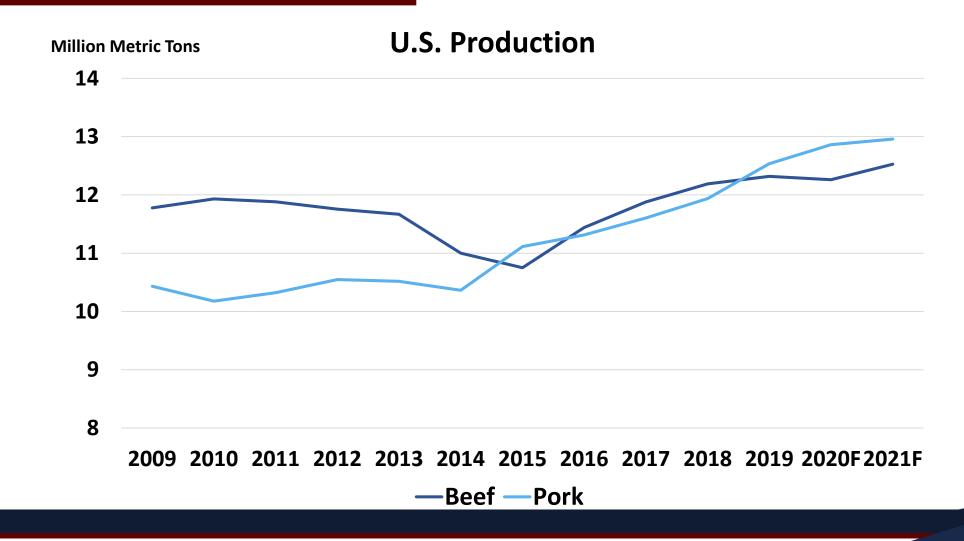


### Record U.S. production of poultry, pork, and beef expected in 2021



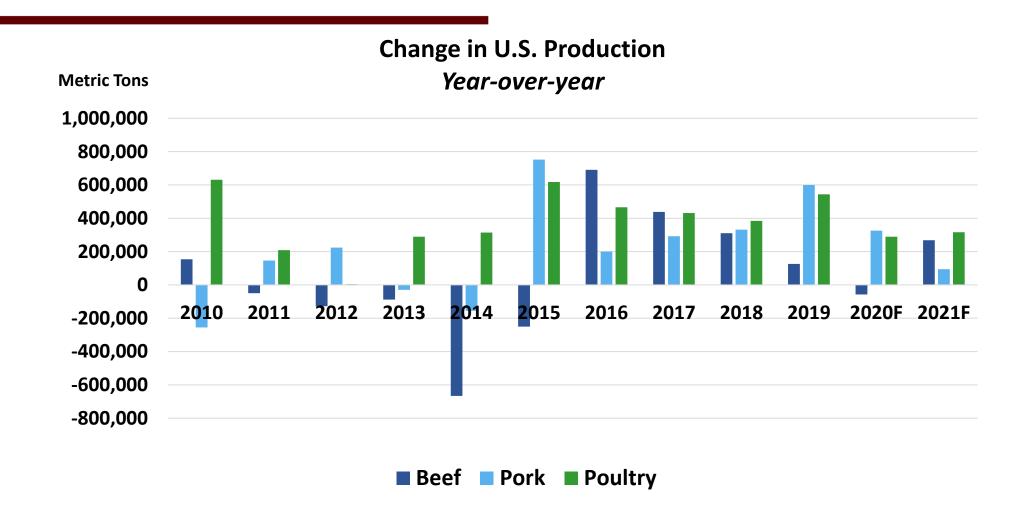


#### Record U.S. production of pork and beef expected in 2021



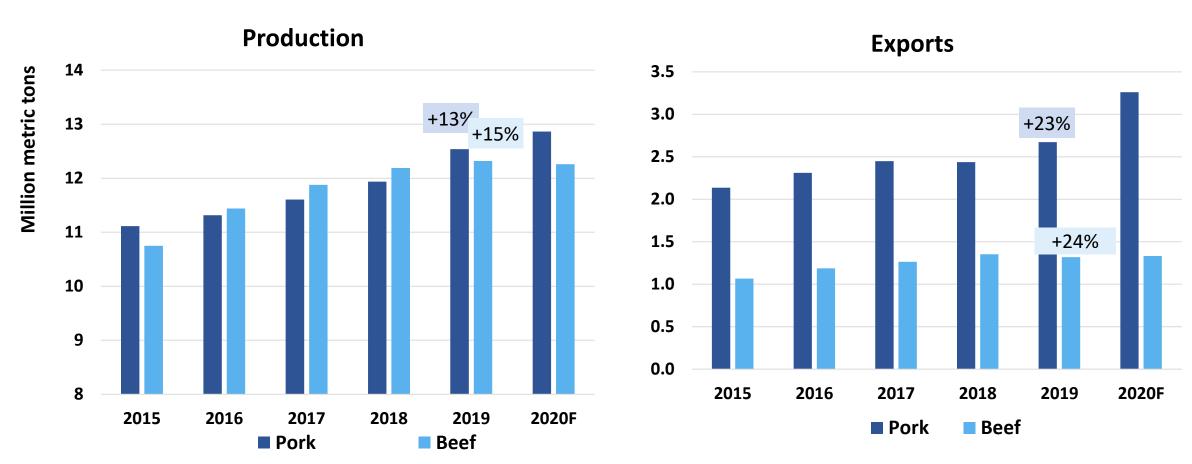


USDA expects significant growth of pork production in 2020 with beef to rebound in 2021





Record large exports underpinning beef and pork production growth in U.S. With double-digit growth for both U.S. production & exports from 2015 – 2019

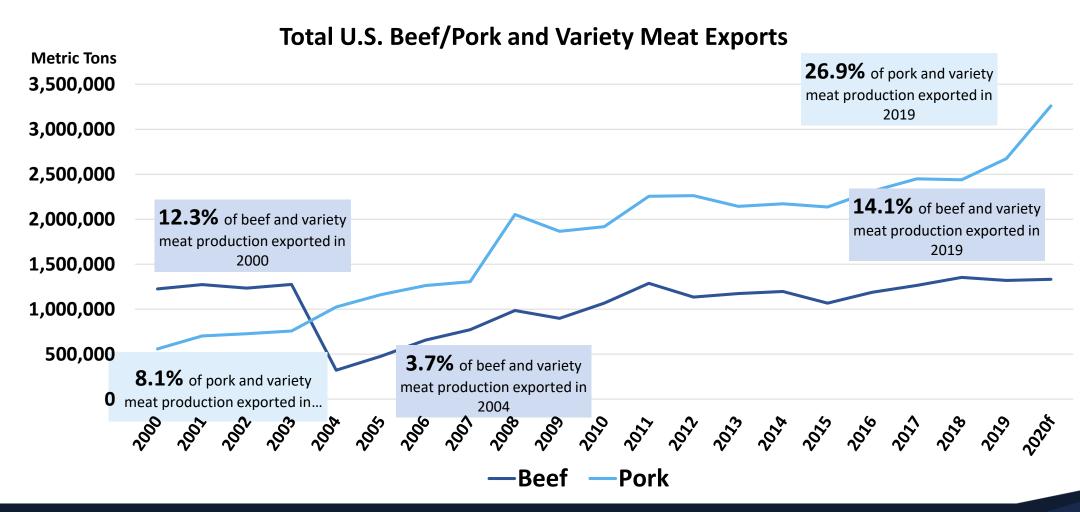


<sup>\*</sup>Production in carcass weight; exports in product weight and include variety meats



<sup>\*</sup>Percent change noted is 2019 compared to 2015

Exports accounting for a larger share of production even as production is record large about 32% of pork/pvm production and >14% beef/bvm to be exported in 2020





#### **USDA Forecasts Summary**

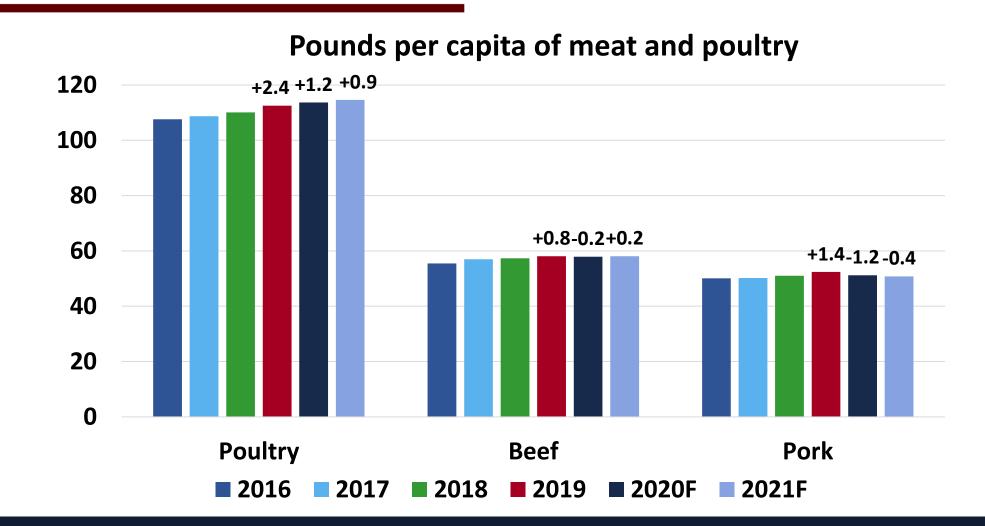
BEEF	2018	2019	2020F	2021F
Production	+2.6%	+1.0%	-0.5%	+2.2%
Exports	+10.3%	-4.4%	-4.3%	+8.4%
Imports	+0.1%	+2.0%	+2.6%	-2.9%
Per Cap Cons.	+0.4%	+1.4%	-0.3%	+0.3%

PORK	2018	2019	2020F	2021F
Production	+2.9%	+5.0%	+2.6%	+0.7%
Exports	+4.2%	+7.6%	+19.4%	+1.4%
Imports	-6.6%	-9.3%	-8.9%	+3.9%
Per Cap Cons.	+1.4%	+2.8%	-2.3%	-0.8%

The August WASDE revised the 2020 beef production forecast higher, and private analysts are forecasting slight growth for beef production in 2020 given the fast rebound in slaughter/production

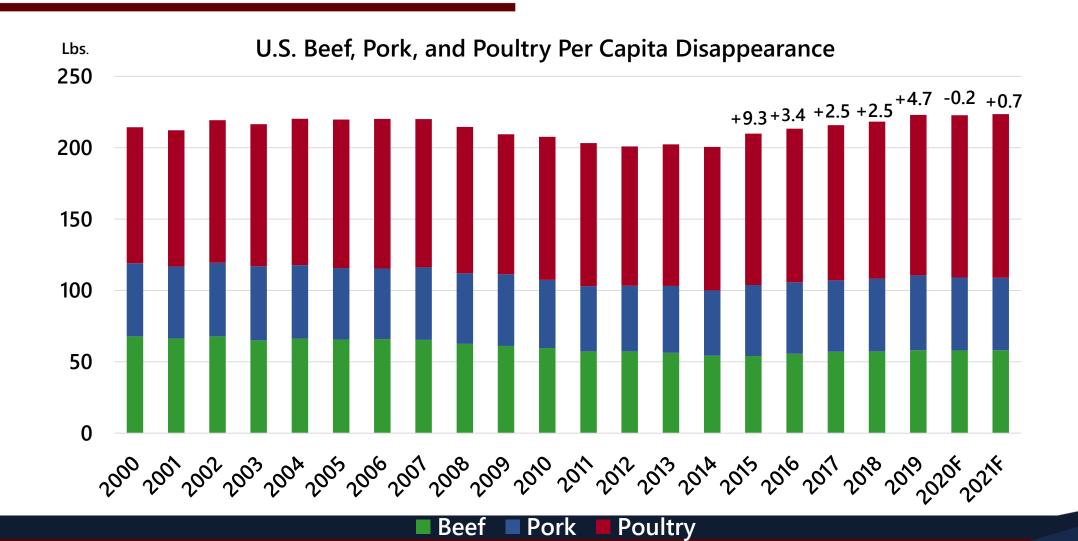


#### U.S. Per Capita Disappearance



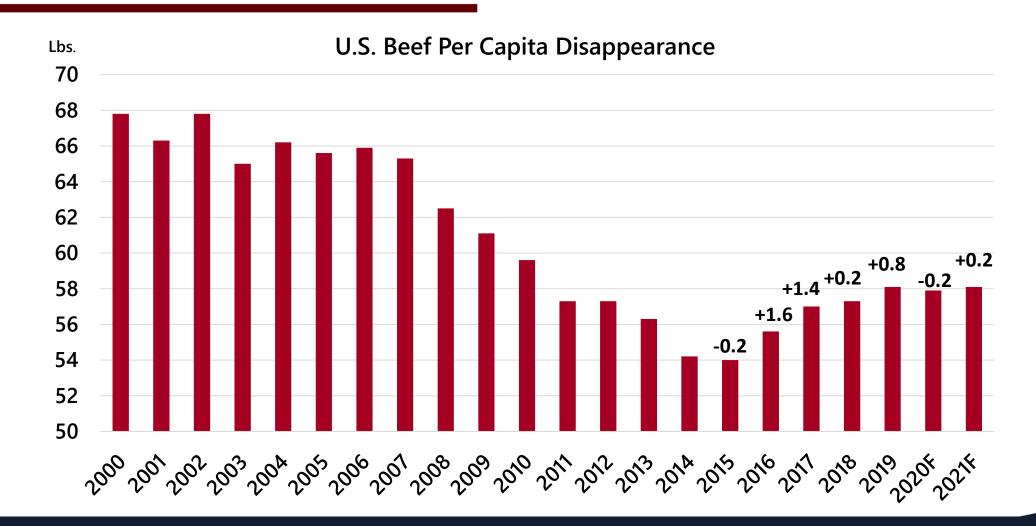


Combined per capita consumption for the main proteins will be slightly lower in 2020 (in part due to record pork exports) but is expected to rebound in 2021



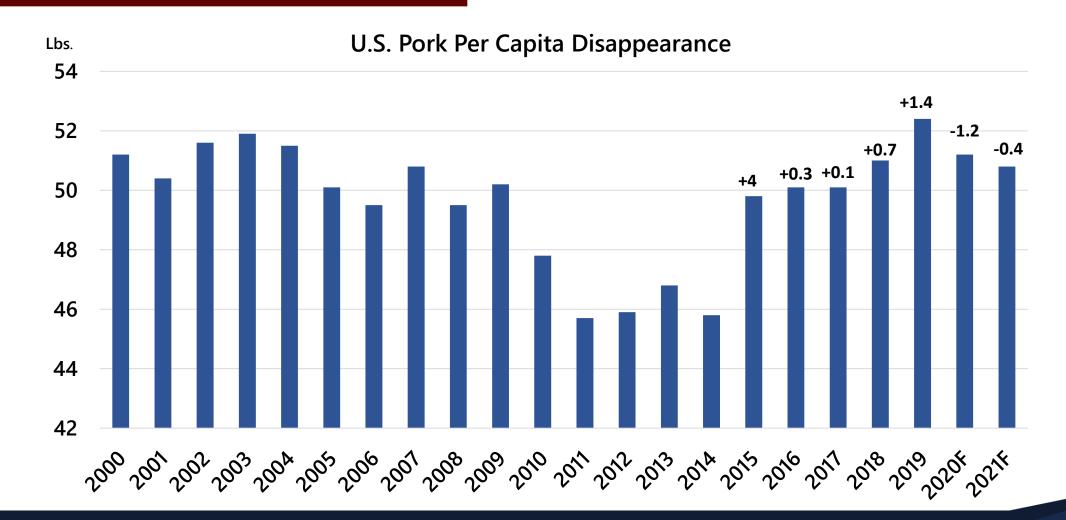


U.S. beef per capita disappearance expected to tighten slightly in 2020 before rebounding in 2021



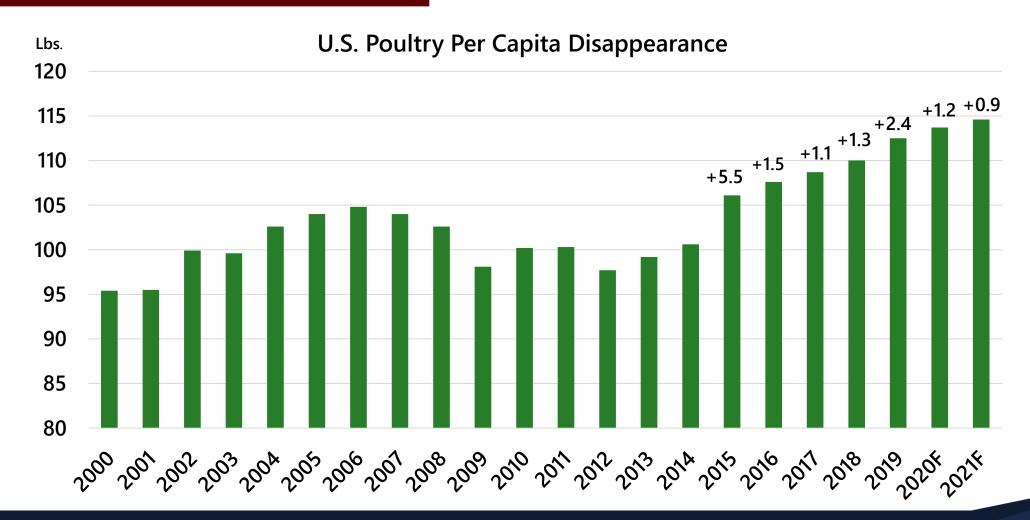


Record U.S. pork exports essential to keep U.S. pork capita pork disappearance below recent highs





Per capita poultry consumption is expected to continue to reach new records although year-over-year growth is expected to moderate







#### June Hog Inventory up 5%

The U.S. inventory of all hogs and pigs on June 1, 2020 was **79.6 million head, up 5%** from June 2019 and up 3% from March 2020. Both the **total inventory** and the **market hog inventory were record large** for the June quarter in 2020, and the March – May **pig crop and number of pigs saved per litter** were also record large.

Hogs and Pigs June Inventory	2020 (million head)	Change from June 2019 (%)	Change from last quarter (%)
Total Inventory	79.6	+5%	+3%
Breeding Inventory	6.33	-1%	-1%
Market Hog Inventory	73.3	+6%	+3%

March - May Pig Crop and Sows Farrowed	2020 (million head)	2019 (million head)	Change (%)
Pig Crop	34.9	34.5	+1%
Sows Farrowed	3.17	3.13	+1%
Pigs Saved Per Litter	11.01	11.0	+<1%



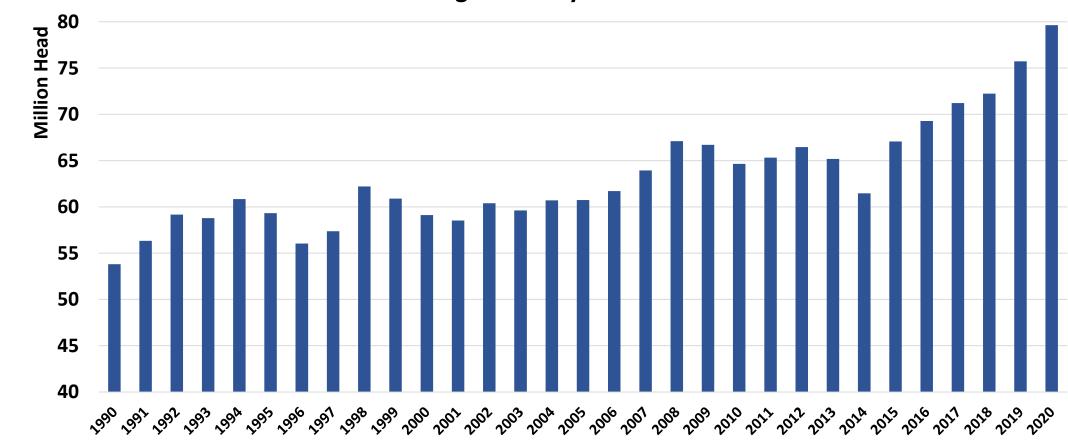
#### Record Large Hog Inventory

**2018:** 72.2 mil head, +1.4%

**2019:** 75.7 mil head, +4.8%

**2020:** 79.6 mil head, +5.2%

U.S. Total Hog Inventory on June 1





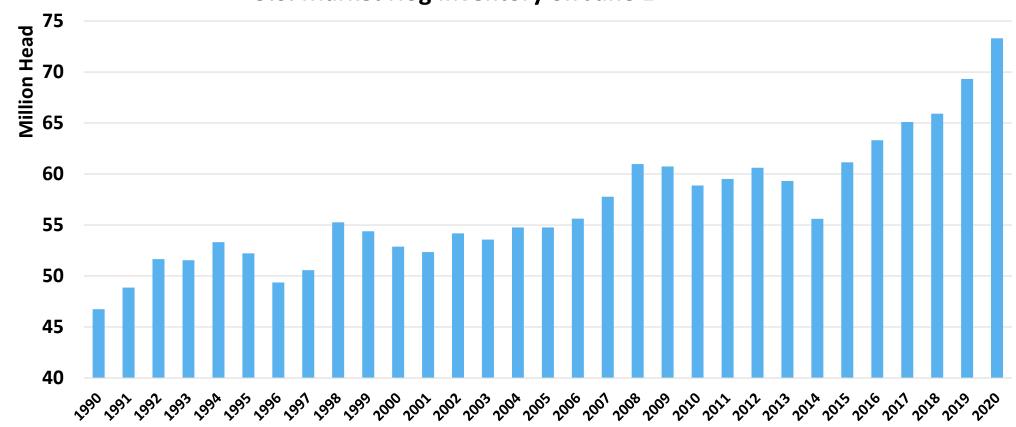
#### Record Large Market Hog Inventory

**2018:** 65.9 mil head, +1.2%

**2019:** 69.3 mil head, +5.2%

**2020:** 73.3 mil head, +5.8%

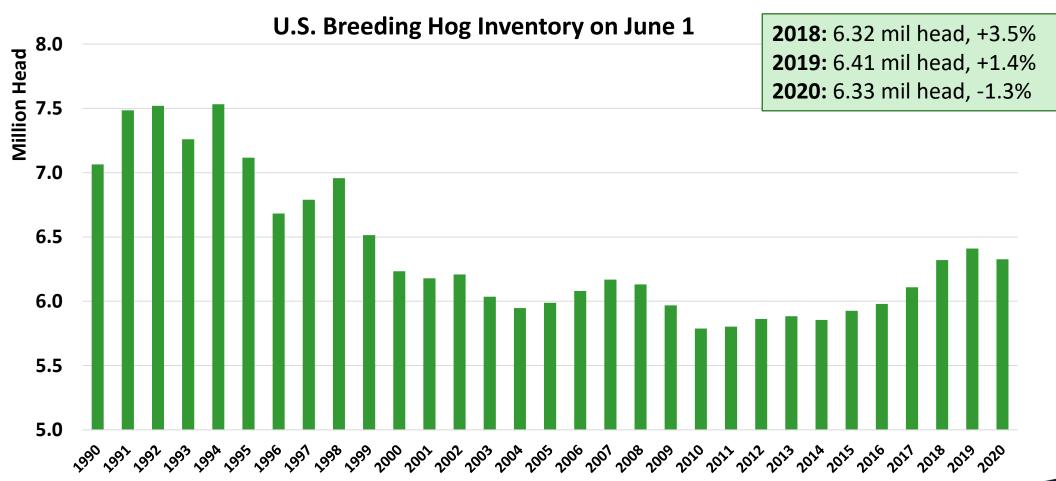






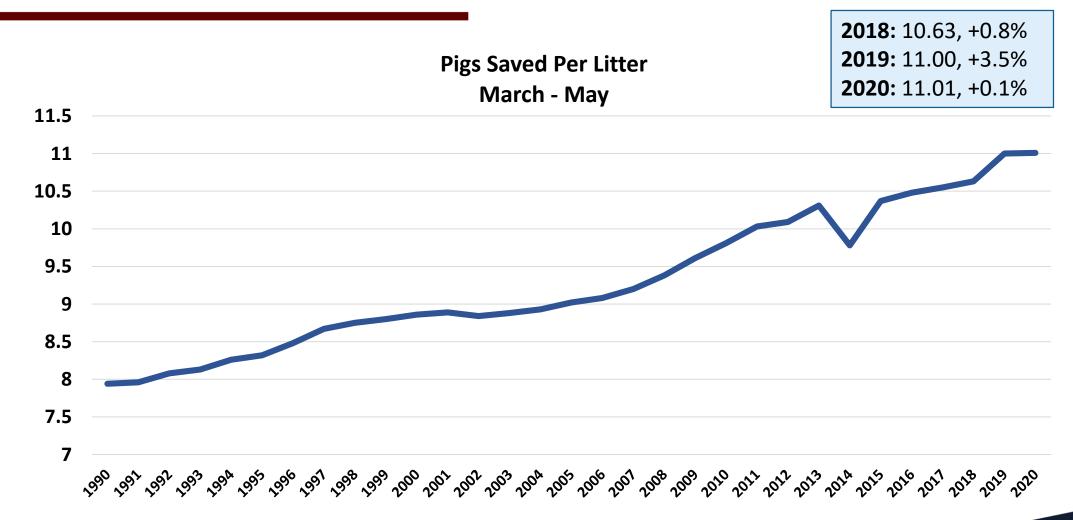
Source: USDA/NASS

After increasing since 2015, the June breeding inventory decreased 1%, but apart from last year was still at the highest level since 1999



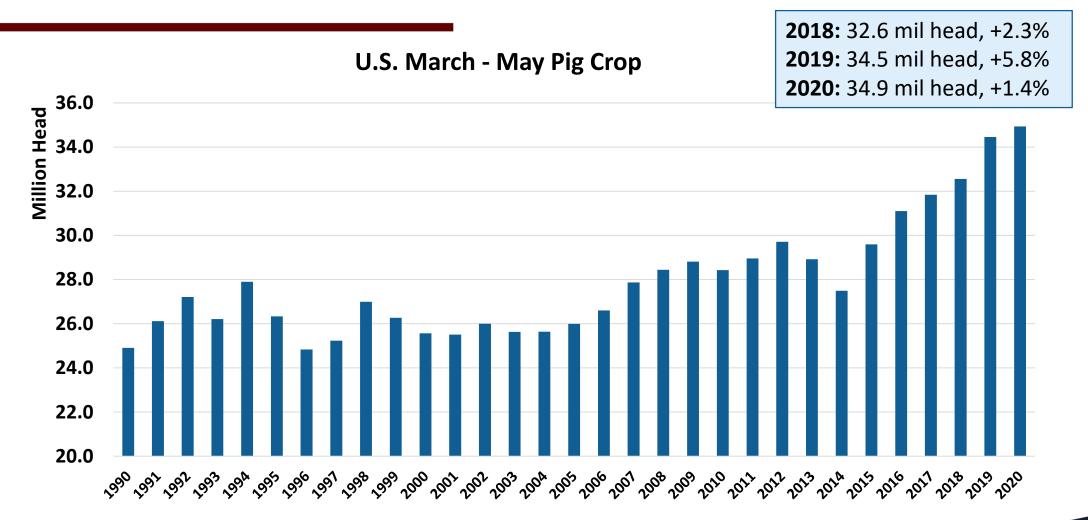


#### Higher Number of Pigs Saved Per Litter = Increasing Productivity



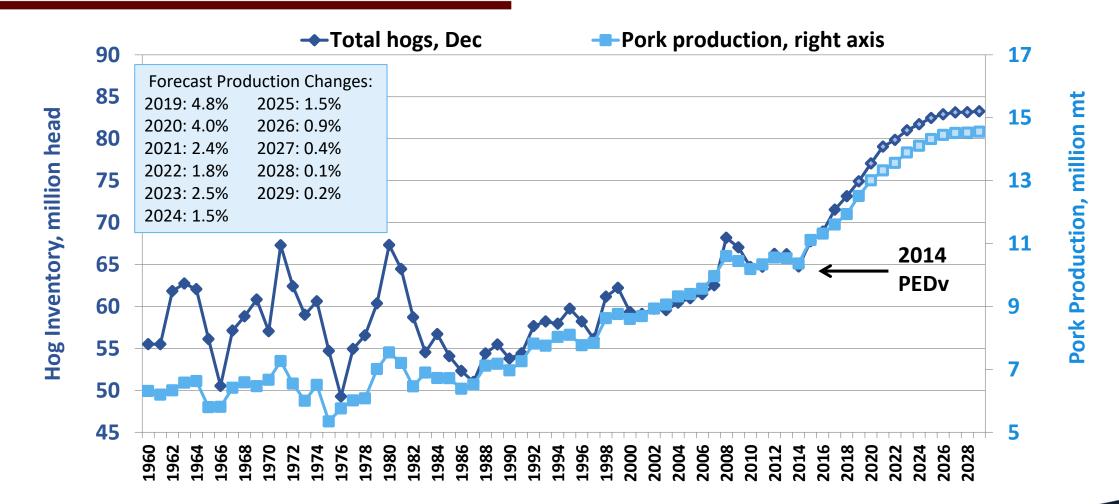


### Continued record large pig crops



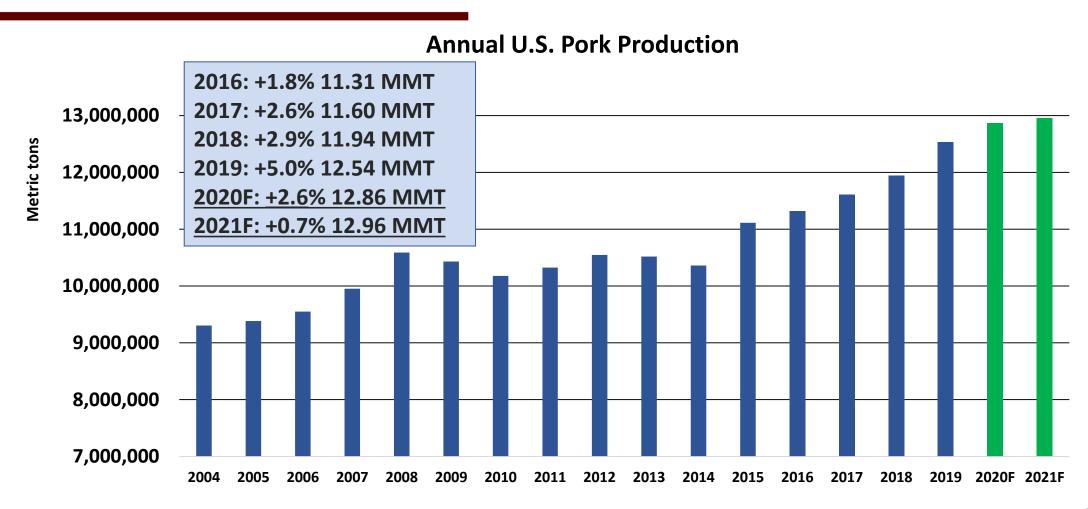


#### U.S. Hog Inventory & Pork Production





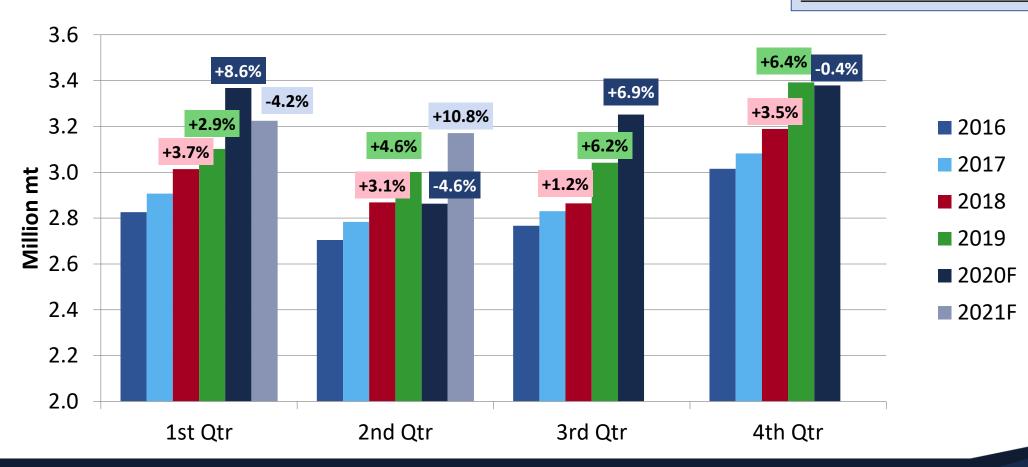
#### USDA expects U.S. pork production to be up 2.6% to a new record in 2020





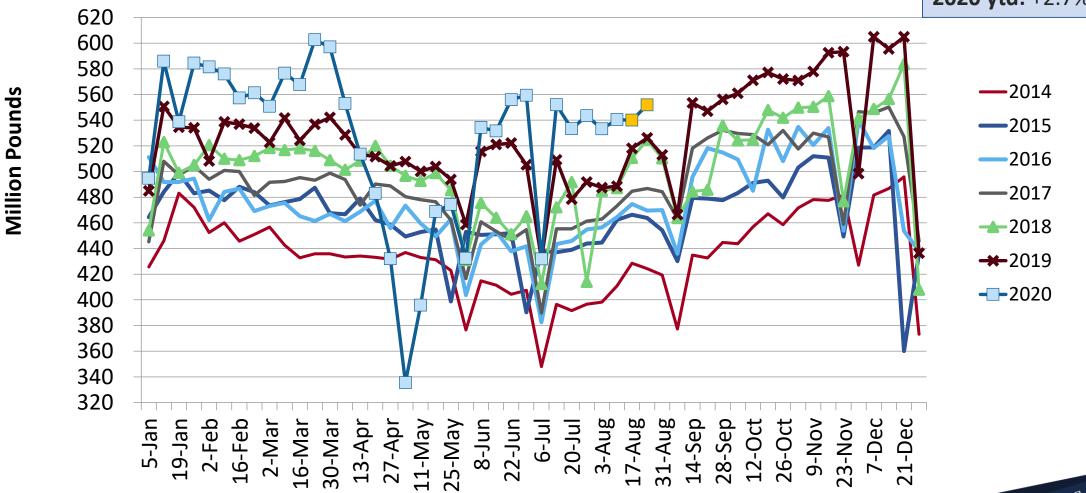
#### Quarterly U.S. Pork Production Forecast

2016: +1.8% 11.31 MMT 2017: +2.6% 11.60 MMT 2018: +2.9% 11.94 MMT 2019: +5.0% 12.54 MMT 2020F: +2.6% 12.86 MMT 2021F: +0.7% 12.96 MMT



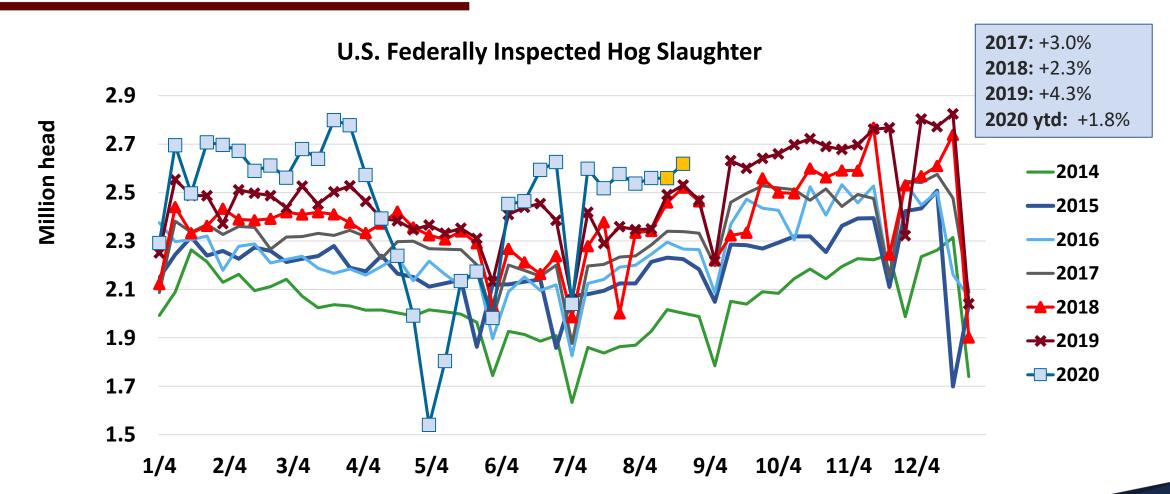
U.S. Pork Production back above year-ago levels since the first week of June and averaging up 7% year-over-year since June





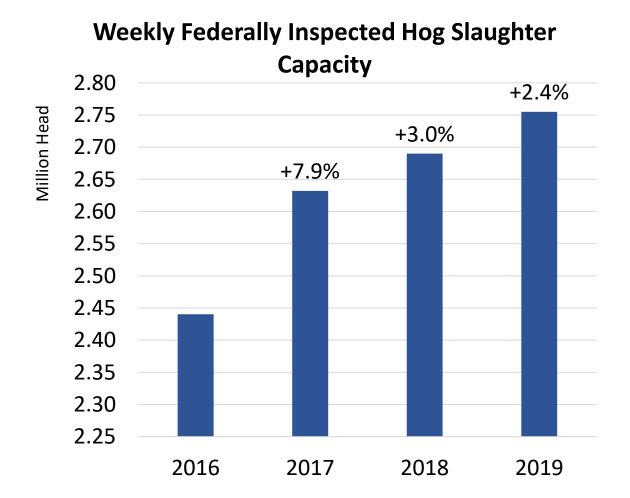


#### U.S. Hog Slaughter





#### U.S. slaughter capacity has increased significantly since 2016



4 new pork plants operating since 2016

**Annual Capacity & Increase:** 

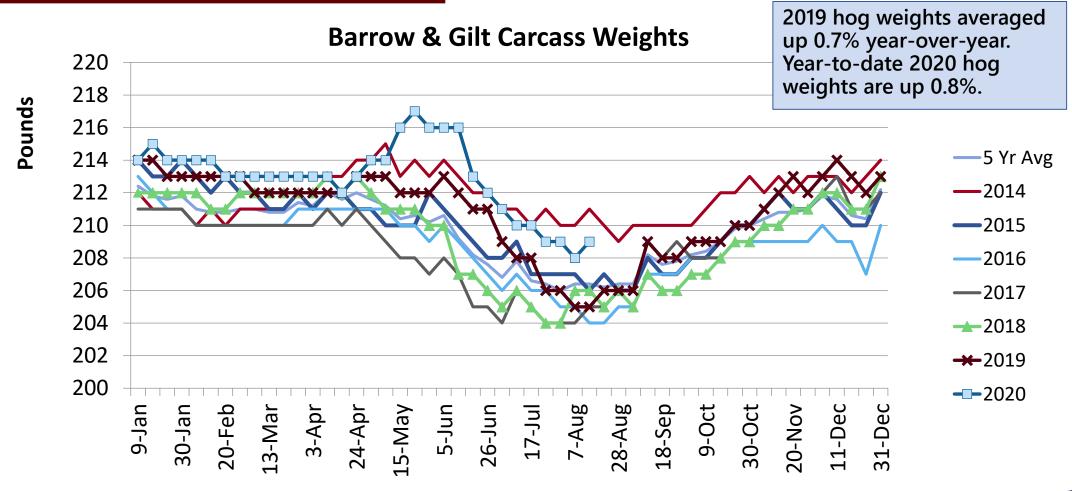
2017: 137 mil head, +10 mil 2018: 140 mil head, +3 mil 2019: 143 mil head, +3.4 mil

**Actual Slaughter:** 

+11.7 mil head from 117 mil head in 2016 to 129 mil head in 2019 (+10.0%)

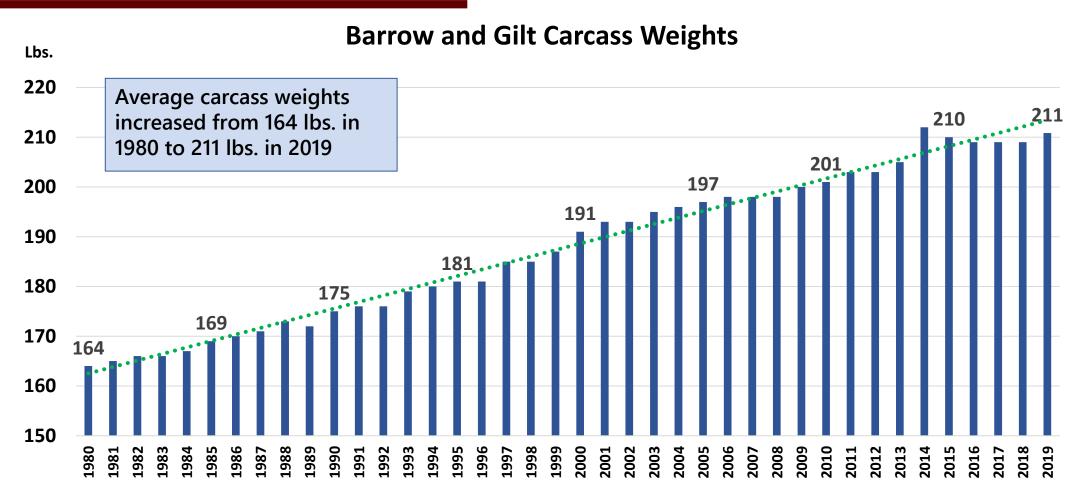


2020 hog weights jumped in May on slower slaughter. Weights have been normalizing since June when slaughter once again exceeded year-ago levels but remain above year-ago





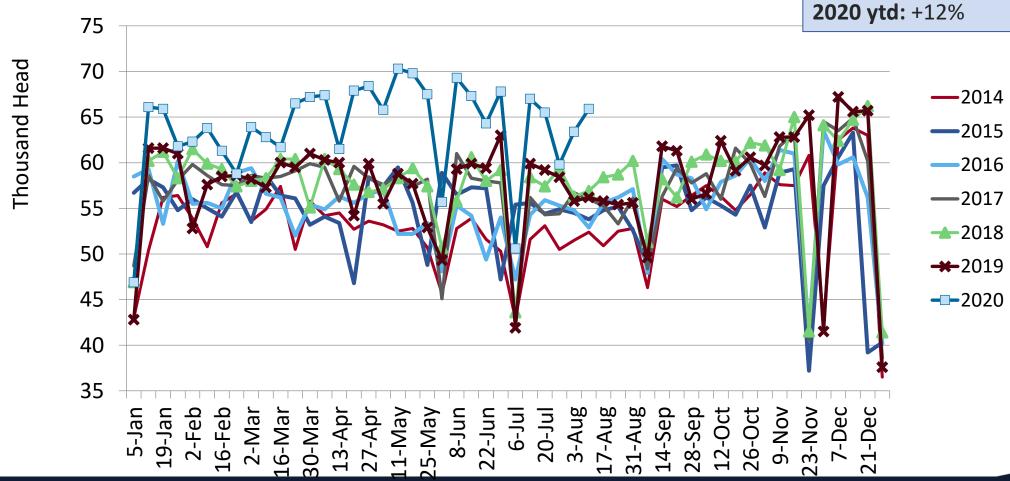
#### Historical Increase in Carcass Weights





#### U.S. Sow Slaughter

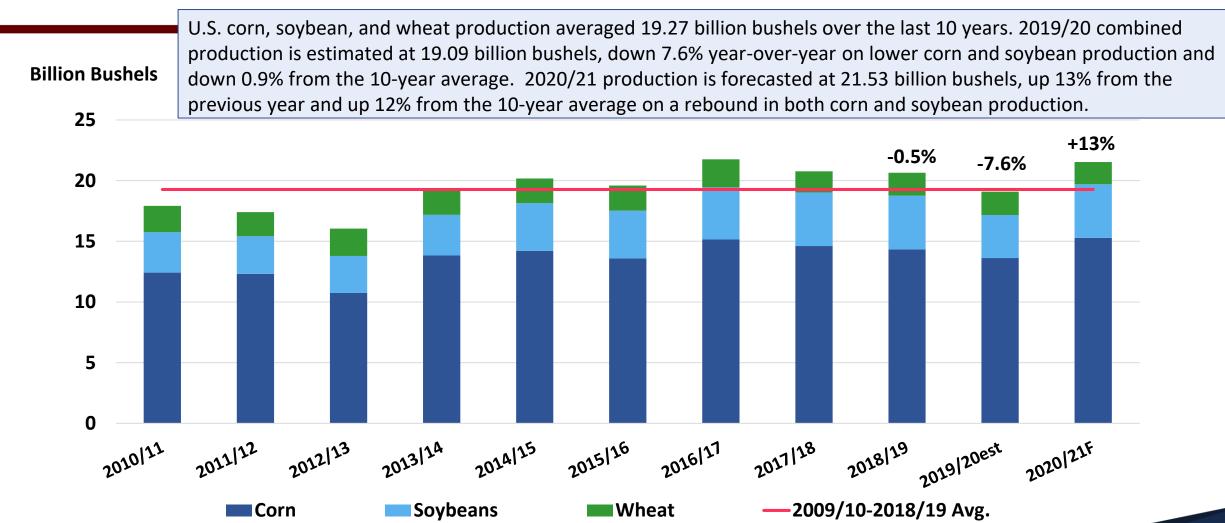






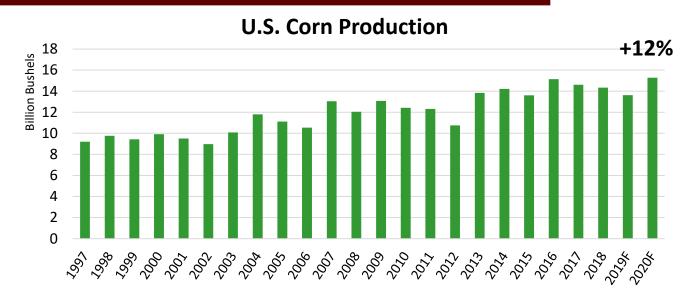
Source: USDA/NASS

## Lower feedgrain/oilseed production in 2019/20, followed by a near record year in 2020/21



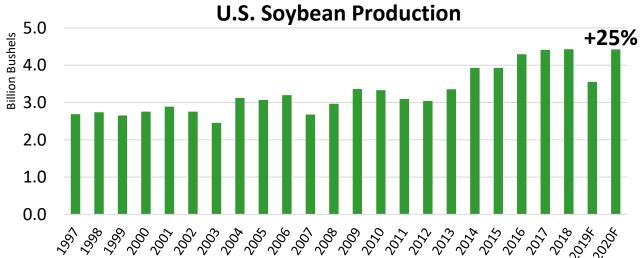


## Rebound in U.S. corn and soybean production expected in 2020/21 with both corn and soybean production at or near record levels



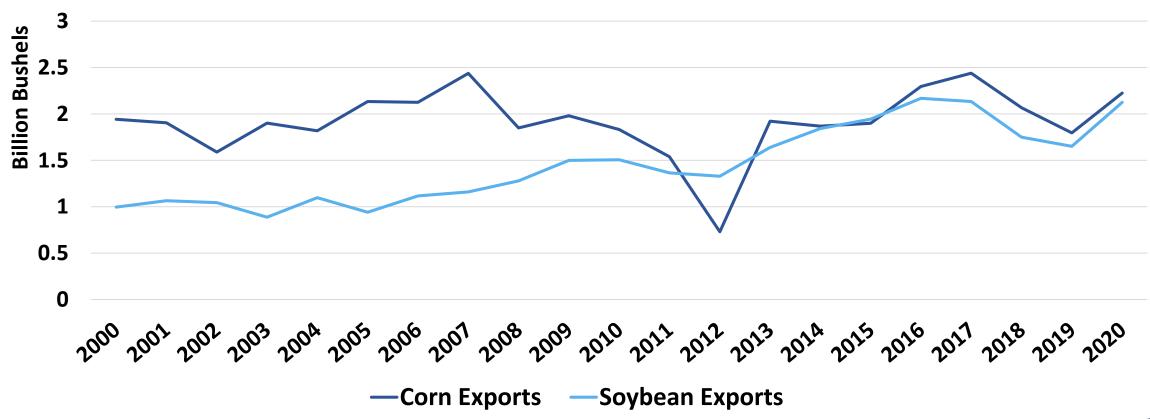
2020/21 U.S. corn production is expected to be record large on larger harvested area and improved yields.

2020/21 soybean production is expected to rebound and be down just slightly from the 2018/19 record following a 20% decrease in production in 2019/20 when weather issues, trade concerns, and record high stocks resulted in less acres of soybeans being planted



# U.S. corn and soybean exports to rebound in 2020/21

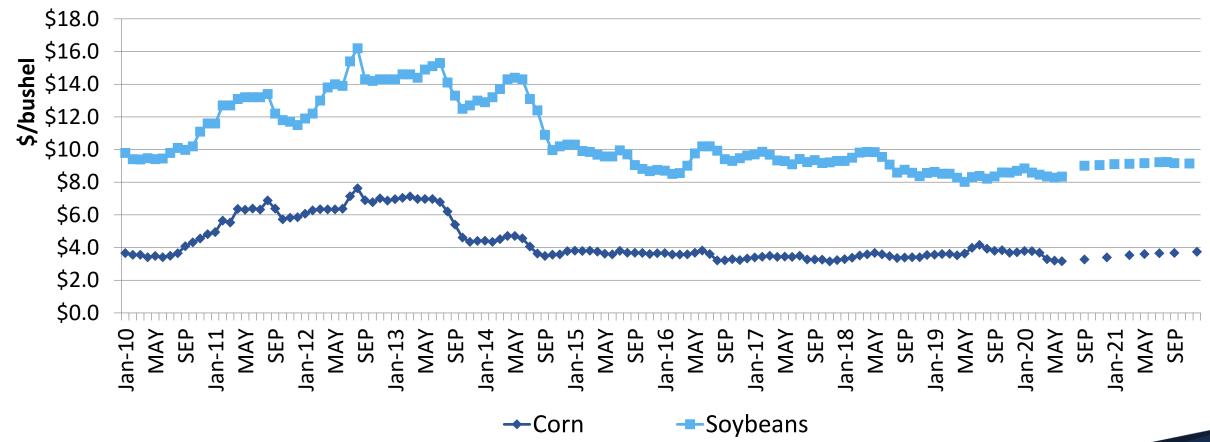






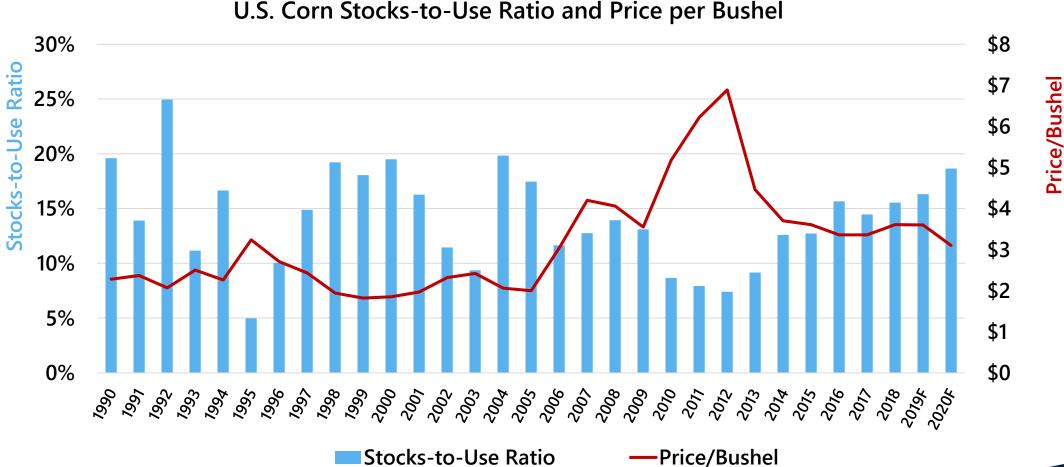
2020 fall soybean prices are expected to rebound somewhat from the low levels since 2019, while 2020 corn futures have adjusted lower due to the slowdown in demand for ethanol due to covid-19 and a significant increase in production expected in 2020/21





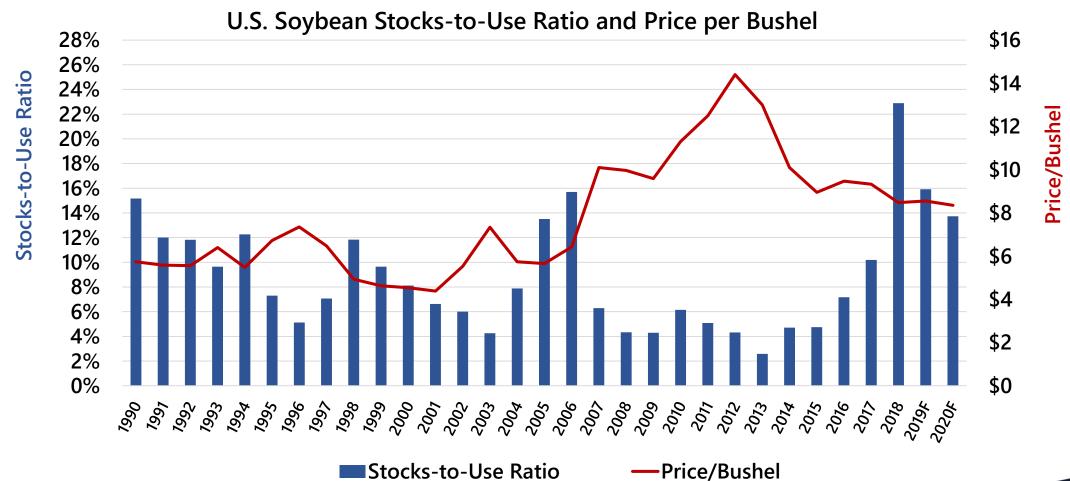


Higher stocks-to-use ratios moderating corn prices in recent years, with a buildup of stocks expected in 2020/21 on larger production



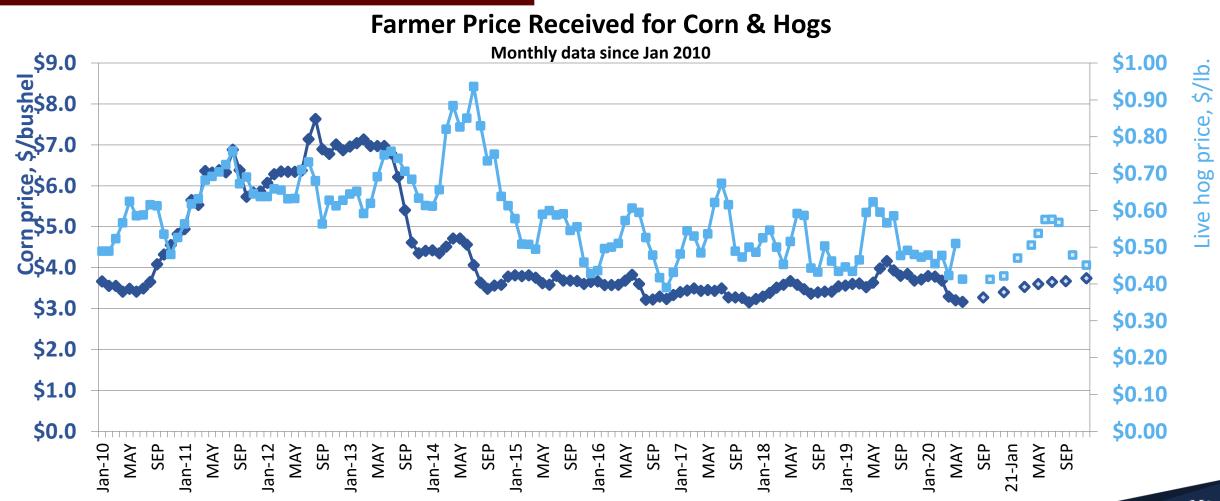


Higher stocks-to-use ratios have been moderating soybean prices in recent years, but stocks have come down from the record high in 2018/19

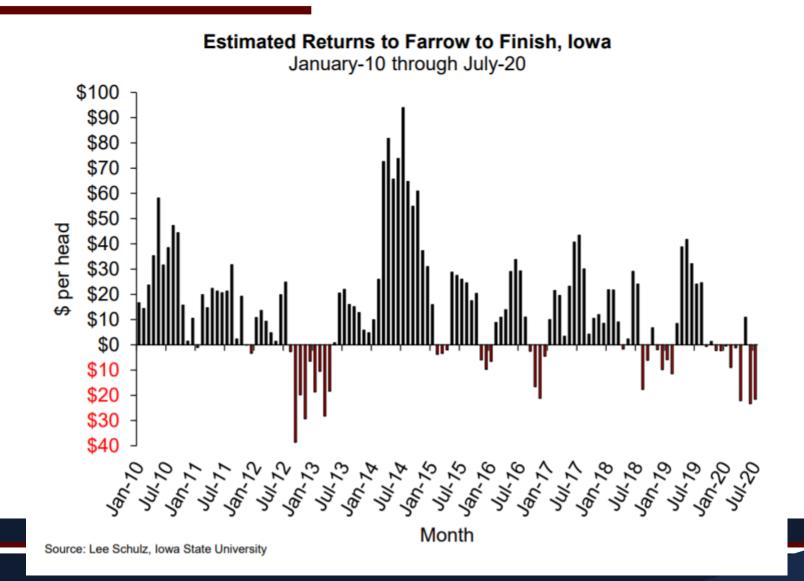




Current corn and hog futures are indicating relatively low prices in the second half of 2020 as a result of covid-19 and large supplies



Iowa State University's estimated market hog profit shows monthly returns have been negative so far in 2020 except for May



The hog futures market is trading lower on continued record large hog supplies, slower foodservice demand due to covid-19, and concerns over the trading relationship with China

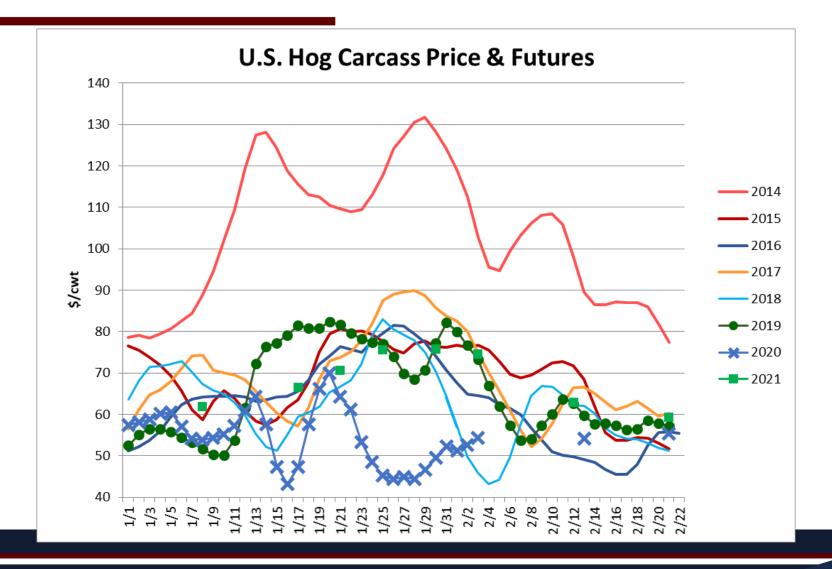
#### October contract



#### December contract

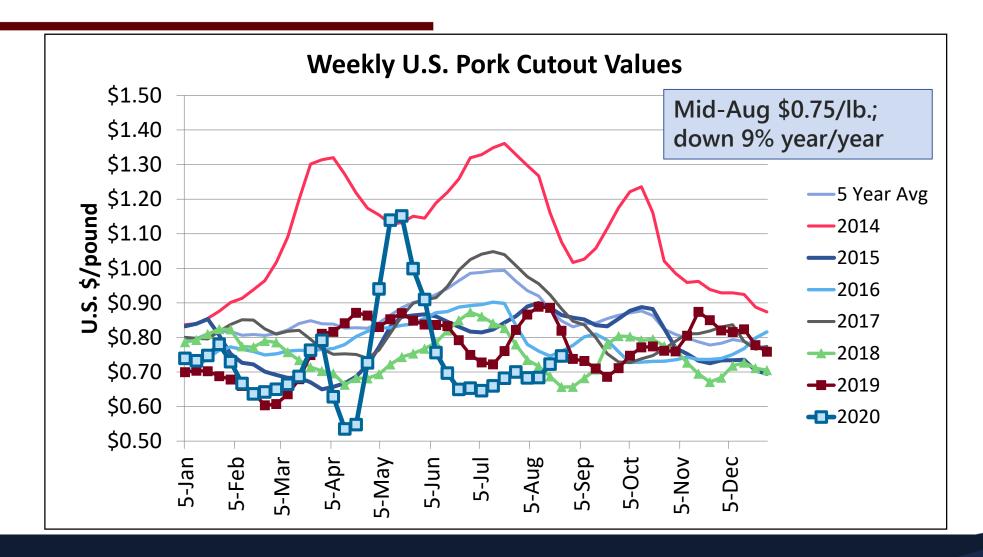


Hog futures have adjusted lower in 2020 due to expected slower demand from foodservice for the rest of the year and record large hog supplies





The pork cutout has been trending higher since the 2<sup>nd</sup> half of July but remains below year-ago levels





Source: USDA/AMS

The loin, rib, and picnic primals are averaging higher year-to-date in 2020, but as of mid-August, the rib, ham, and loin primals were higher year-over-year (with the ham primal higher because of boneless ham values due to tight labor)

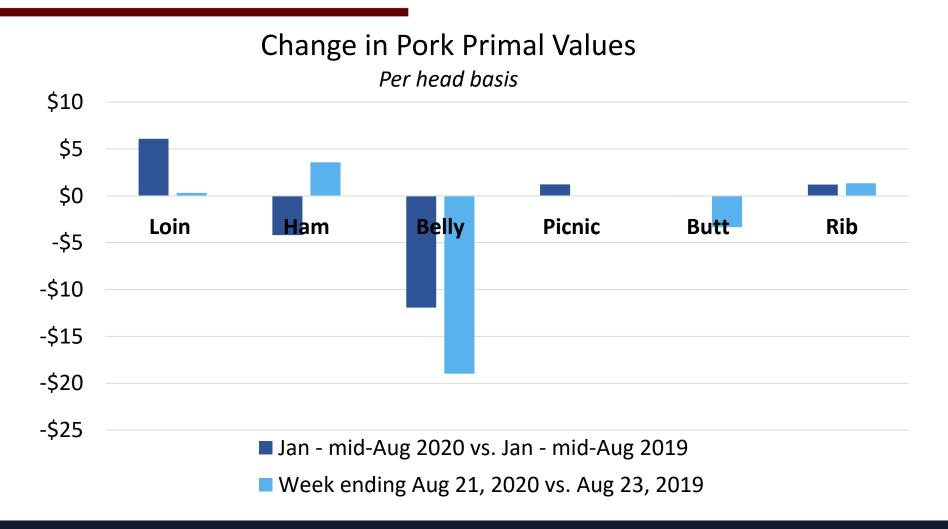
Fob plant wholesale prices in U.S. dollars per pound:

Week end:	Cutout	Loin	Butt	Picnic	Rib	Ham	Belly
Jan – mid Aug 2019 Avg	0.77	0.72	0.87	0.50	1.25	0.63	1.27
Jan – mid Aug 2020 Avg	0.74	0.84	0.87	0.55	1.37	0.55	0.92
Year-over-year Change	-4%	16%	0%	10%	10%	-13%	-27%
8/23/2019	0.82	0.72	0.93	0.50	1.14	0.60	1.60
8/21/2020	0.75	0.73	0.78	0.50	1.27	0.67	1.05
Year-over-year Change	-9%	1%	-17%	0%	12%	11%	-34%



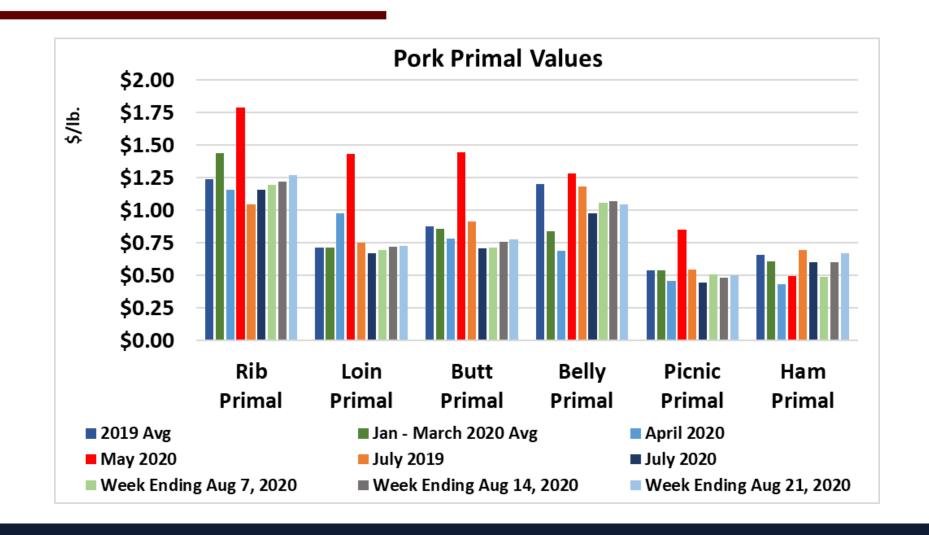
Source: USDA/AMS

The loin primal contributed the highest year-to-date increase in value on a per head basis due to strong demand for loins at retail as consumers stocked up and increased meat purchases earlier this year, but loin values have normalized since June on increased production





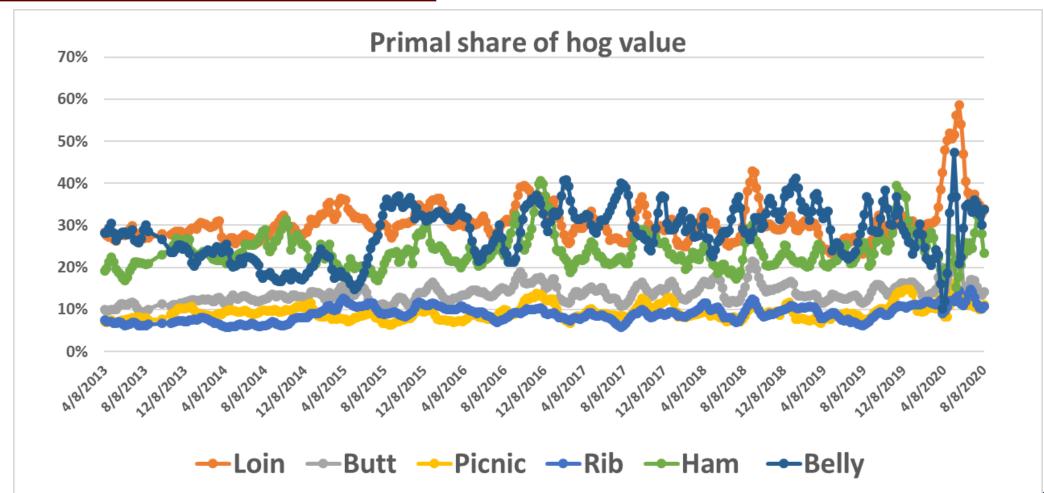
#### Since May, prices have adjusted lower for all primals except the ham primal





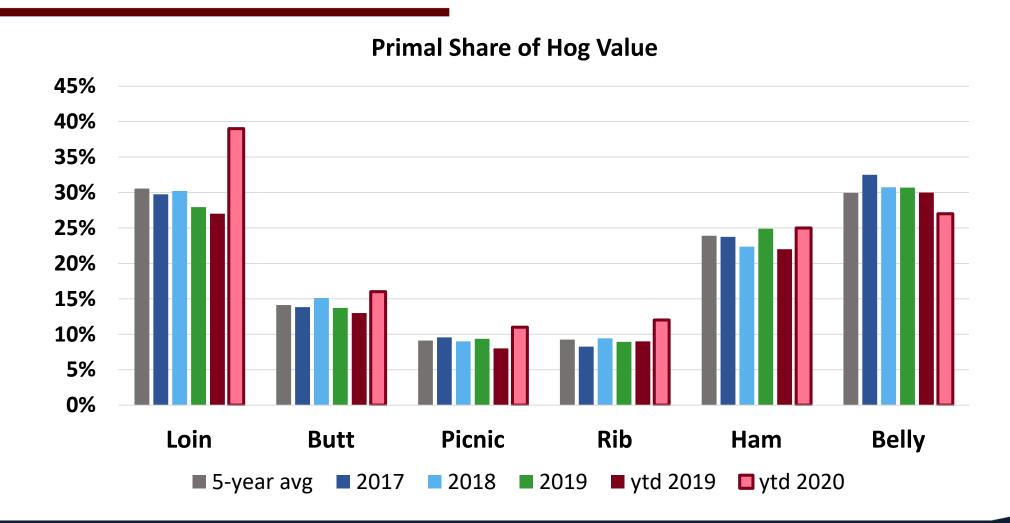
Source: USDA/AMS

Bellies, loins, and hams contribute the largest shares to the hog value. In April and May 2020, the share contributed by the loin surged on strong retail demand, before adjusting lower from June - August



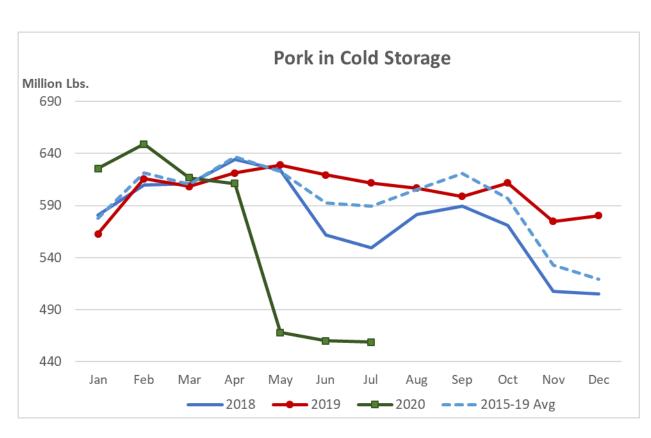


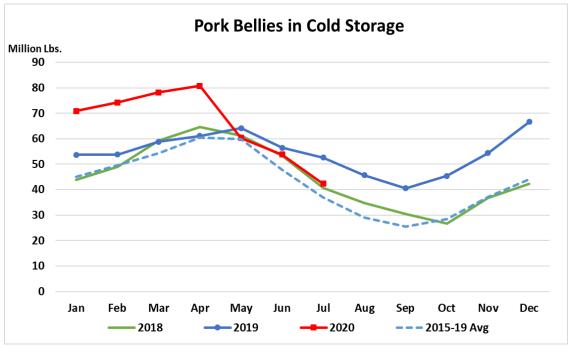
Year-to-date 2020, there has been a notable in increase in value coming from the loin primal, with more moderate increases for the butt, picnic, rib, and ham primals, while the share from the belly primal is lower





Cold storage stocks were down 22% from the previous 5-year average in June and July despite rebounding production and record large exports, indicating smaller supplies of stocks held for future domestic use

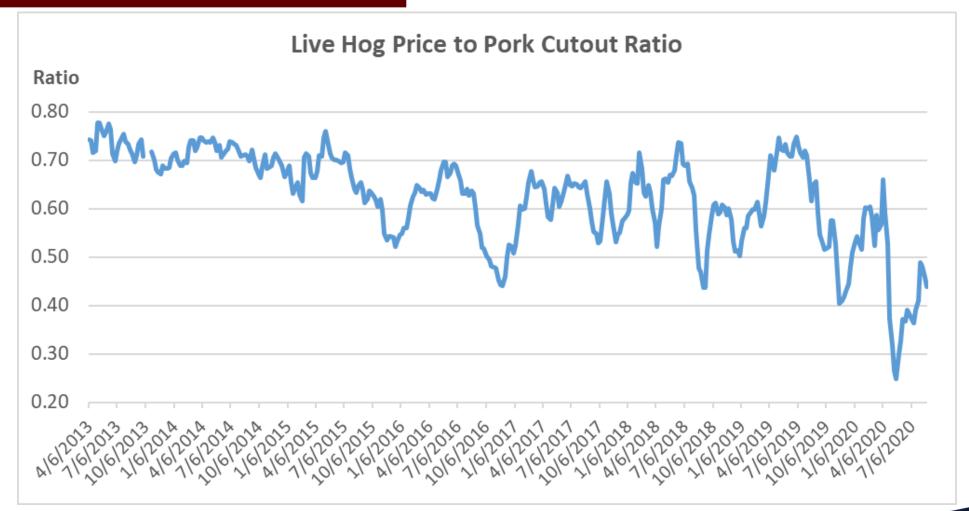




Stocks of pork bellies continued to build up in March/April due to slower foodservice demand (where bacon is popular on QSR breakfast sandwiches), but stocks decreased from May – July (partially seasonal)



The spread between hog prices and the cutout widened in April and the first half of May as plant capacity was constrained by covid-19 related slowdowns but has since narrowed somewhat into August with the recovery in production





## Processed pork dominates U.S. pork sales at foodservice



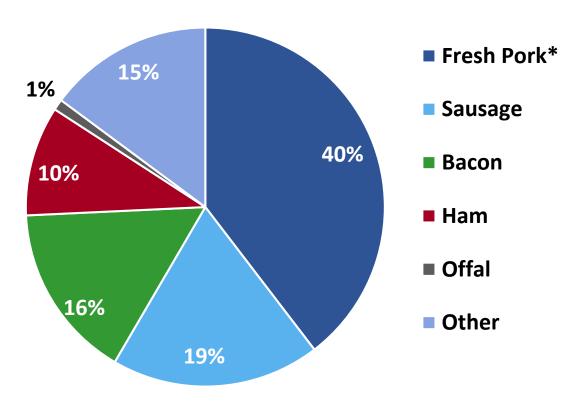
- Nearly 80% of pork sold at foodservice was processed and 21% was fresh in 2018
- Limited-service restaurants accounted for 58% of pork volume sold at foodservice in 2018 and full-service restaurants accounted for 23%
- Limited-service restaurants accounted for about 70% of the processed pork volume at foodservice, while full-service restaurants accounted for about 60% of fresh pork
- The top pork items sold at foodservice by volume in 2018:
  - Bacon 32.3% of total volume
  - Breakfast sausage -11.9%
  - Ham 9.8%
  - Ribs -8.7%
  - Shoulders 7.2%
- 74% of bacon volume sold at foodservice is sold through limited-service restaurants

# Fresh pork accounts for the largest volume of pork sold at retail, followed by sausage and bacon



- Fresh pork accounted for 40% of pork volume sold at retail in 2019
- The top fresh pork items are:
  - Chops 36% of total fresh pork
  - Ribs 27%
  - Roasts 10%
  - Boneless loins 9%
  - Shoulders 7%
- Although bacon only accounts for 16% of retail volume sales, it accounts for 23% of sales on a value basis, the second highest after fresh pork at 31%

#### 2019 Pork Volume at Retail

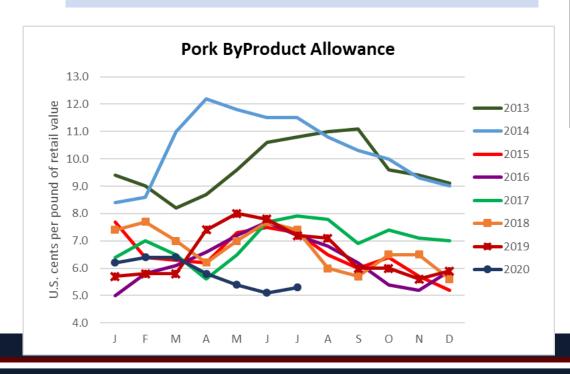


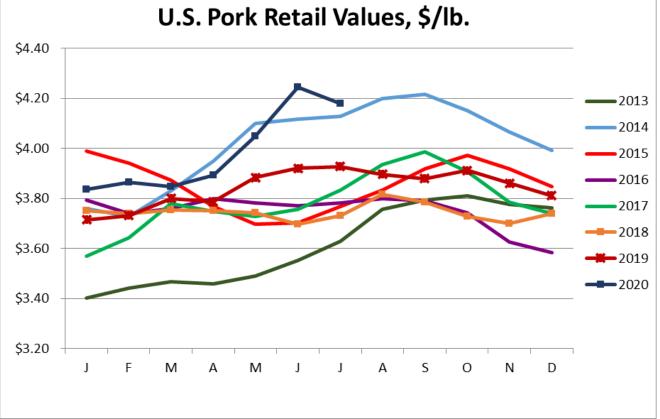
<sup>\*</sup>includes minimally processed cuts and ground pork

Source: NPB, Nielsen

### Pork Retail Value

2019 annual pork retail prices averaged up 3% from 2018 at \$3.84/lb. In July 2020, pork retail values eased down 2% from the record high in June but were up 6% from last year at \$4.18/lb.





In 2019, the annual byproduct allowance averaged 3% lower than 2018. In July 2020, the pork byproduct allowance was up 4% from the previous month but down 26% from the previous year.



Source: USDA/ERS & BLS

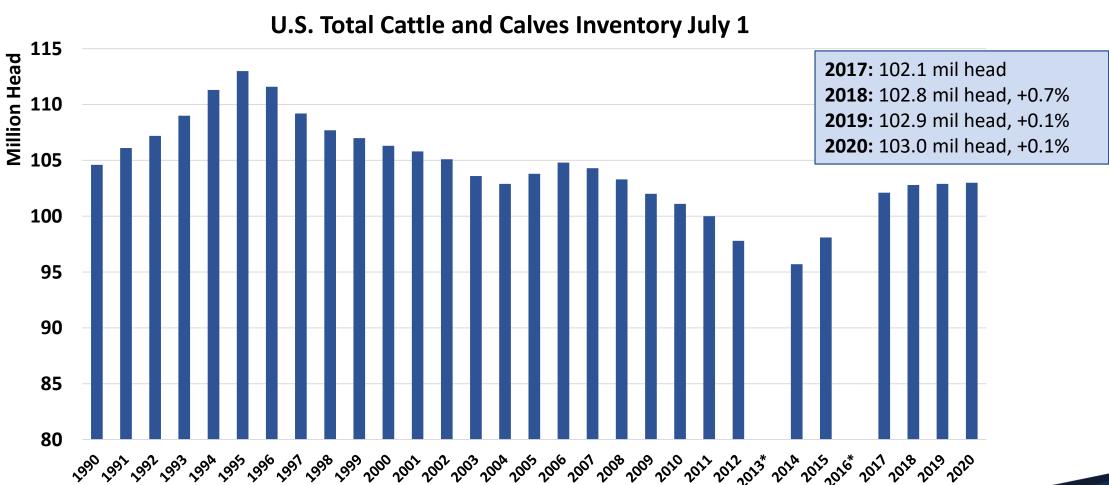


### July Cattle Inventory Report

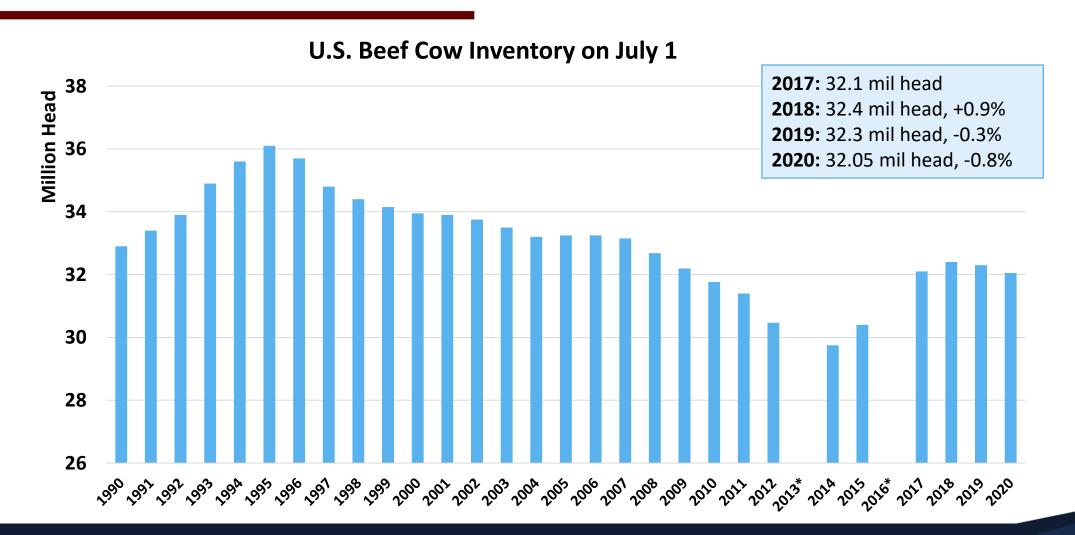
- All cattle and calves in the United States as of July 1, 2020 totaled 103 million head, up 0.1% from July 1, 2019
- All cows and heifers that have calved, at 41.4 million head, were down 0.5% from the 41.6 million on July 1, 2019
  - Beef cows, 32.1 million head, down 1%
  - Milk cows, 9.35 million head, up 1%
- All heifers 500 pounds and over, 16.5 million head, up 1%
  - Beef replacement heifers, 4.40 million, steady
- Cattle on feed in all feedlots, 13.6 million, steady
- Calves under 500 pounds and other heifers and steers over 500 pounds outside feedlots (to be placed on feed in the future) 37.4 mil head, up 1%
- 2020 calf crop estimated at 35.8 mil head, down 1%



#### U.S. total cattle inventory up slightly in 2020



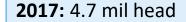
#### Slight decrease in beef cow inventories





### Beef cow replacements steady year-over-year

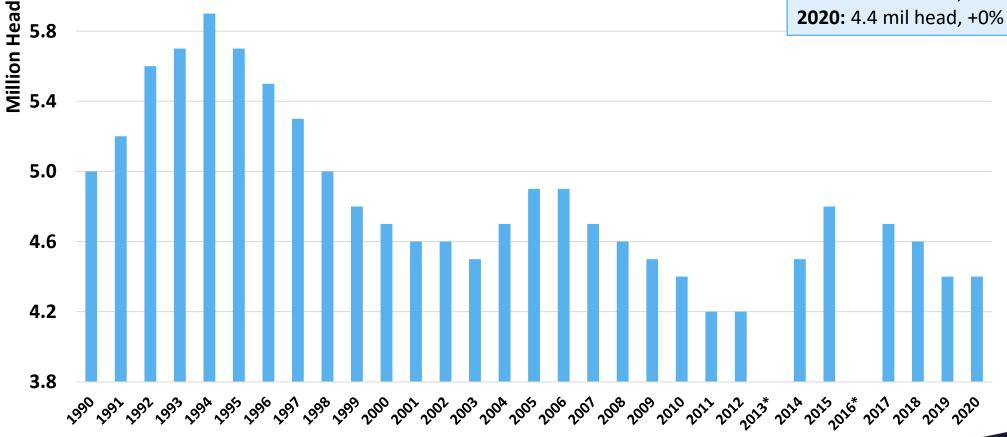




**2018:** 4.6 mil head, -2.1%

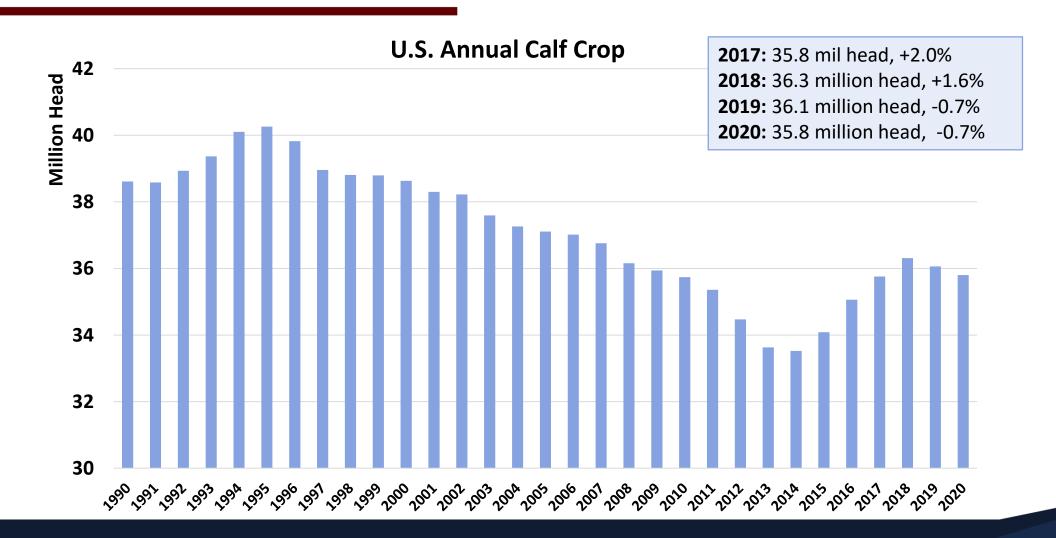
**2019:** 4.4 mil head, -4.3%







### 2020 calf crop down slightly



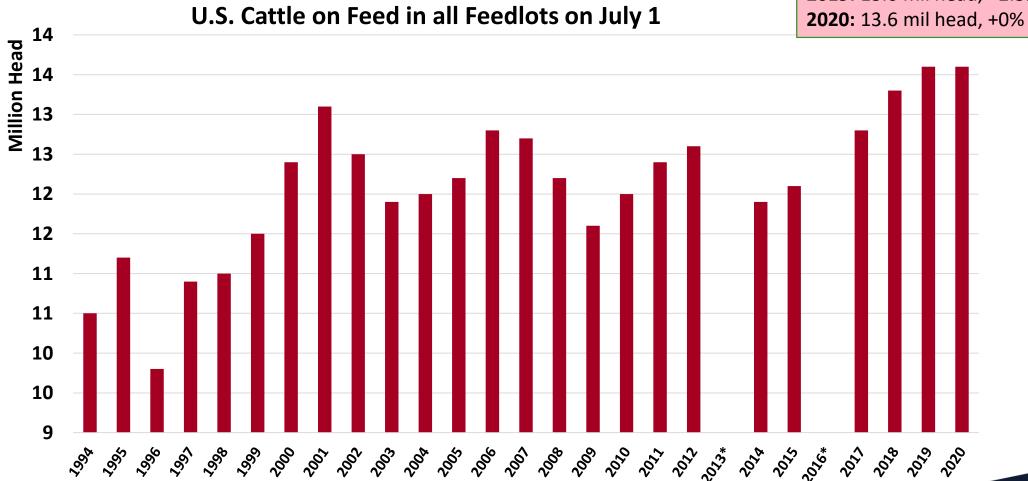


Cattle on feed in all feedlots steady year-overyear at record high levels in July

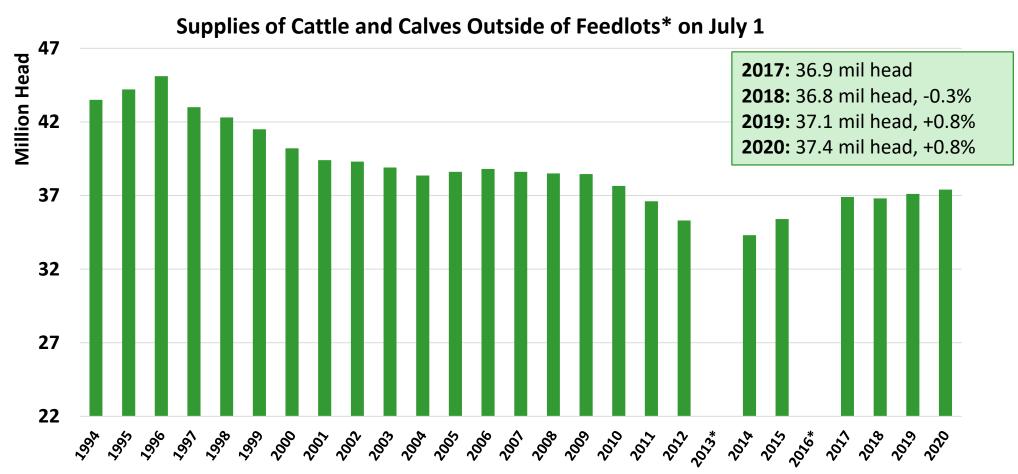
**2017:** 12.8 mil head

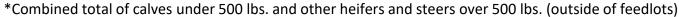
**2018:** 13.3 mil head, +3.9%

**2019:** 13.6 mil head, +2.3%



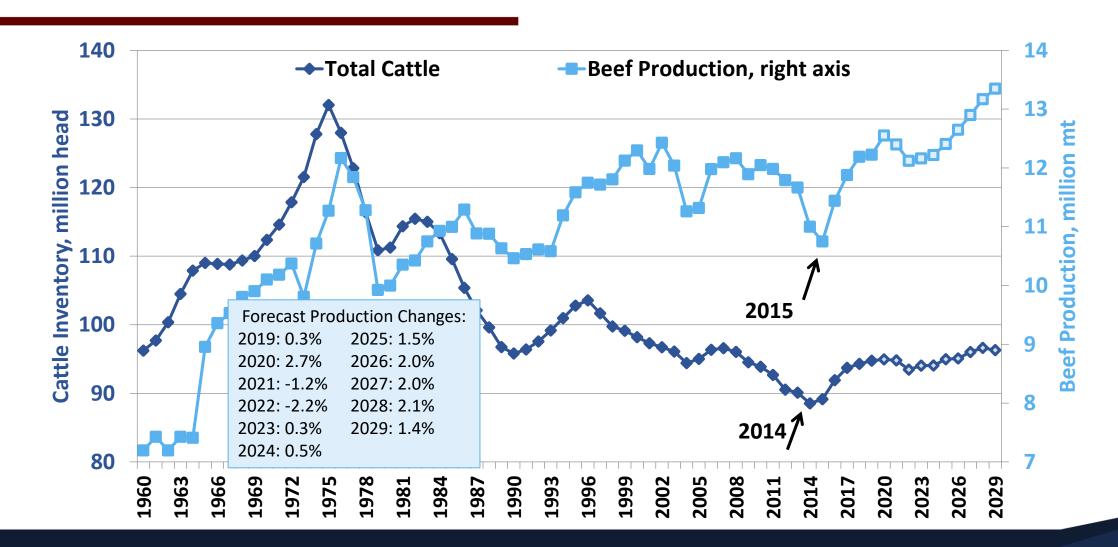
### Slightly larger supplies to still enter feedlots





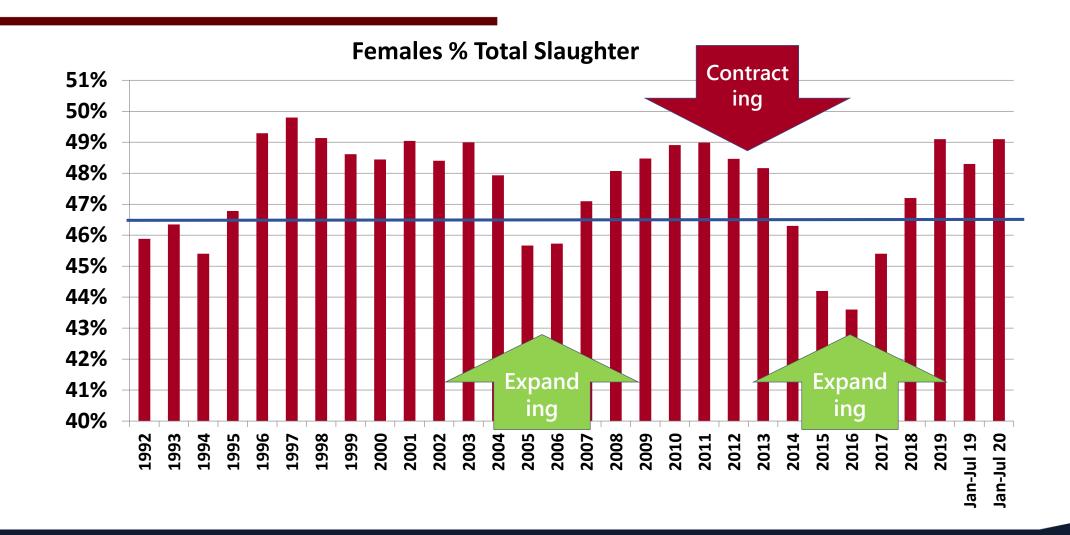


#### U.S. Cattle Inventory & Beef Production



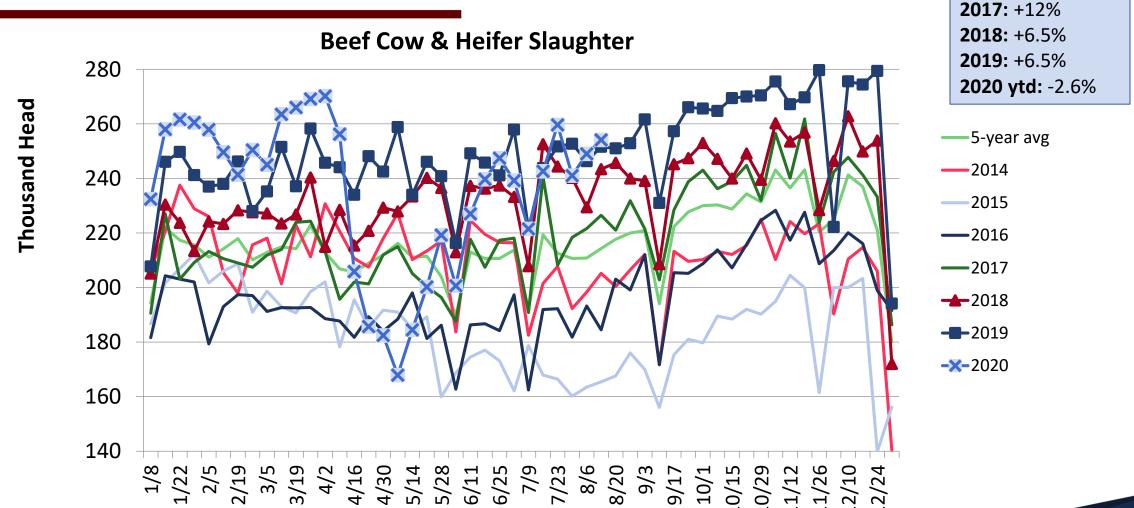


The U.S. has been in the cow herd-rebuilding phase for the last few years, but the larger percentage of females slaughtered in 2019 and 2020 indicates expansion has stopped





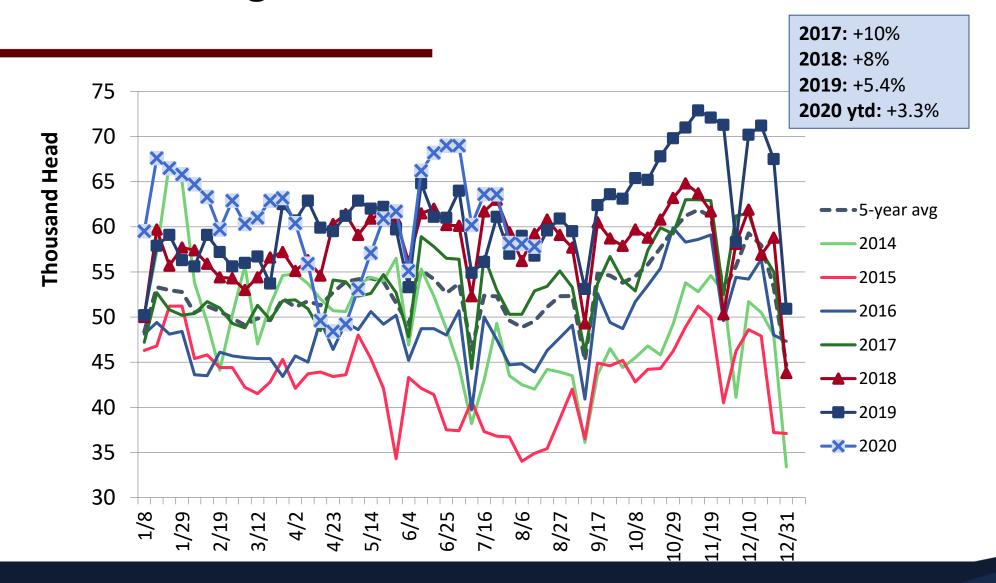
Increasing beef cow and heifer slaughter (before covid-19 slowdowns) as current cattle cycle has plateaued





Source: USDA/NASS

#### U.S. Beef Cow Slaughter



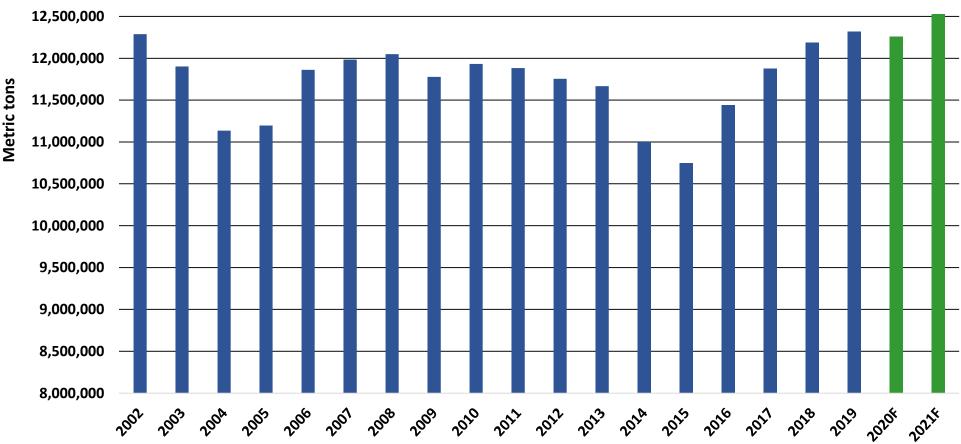


Source: USDA/NASS

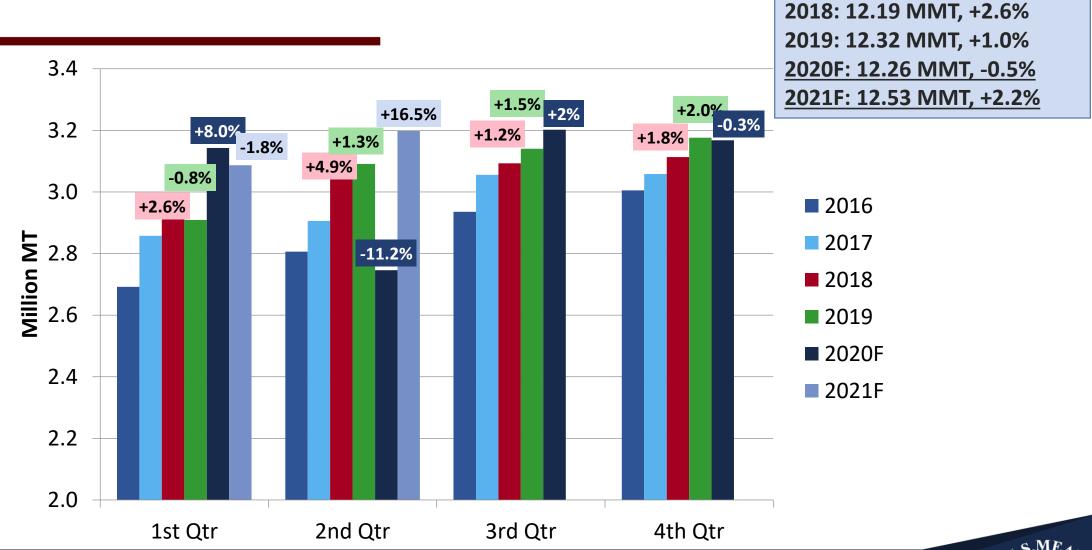
USDA expects 2020 production to contract on covid-19 related disruptions before reaching a new record in 2021 *Private analysts forecasting record beef production in 2020* 

2016: 11.44 MMT, +6.4% 2017: 11.88 MMT, +3.8% 2018: 12.19 MMT, +2.6% 2019: 12.32 MMT, +1.0% 2020F: 12.26 MMT, -0.5% 2021F: 12.53 MMT, +2.2%





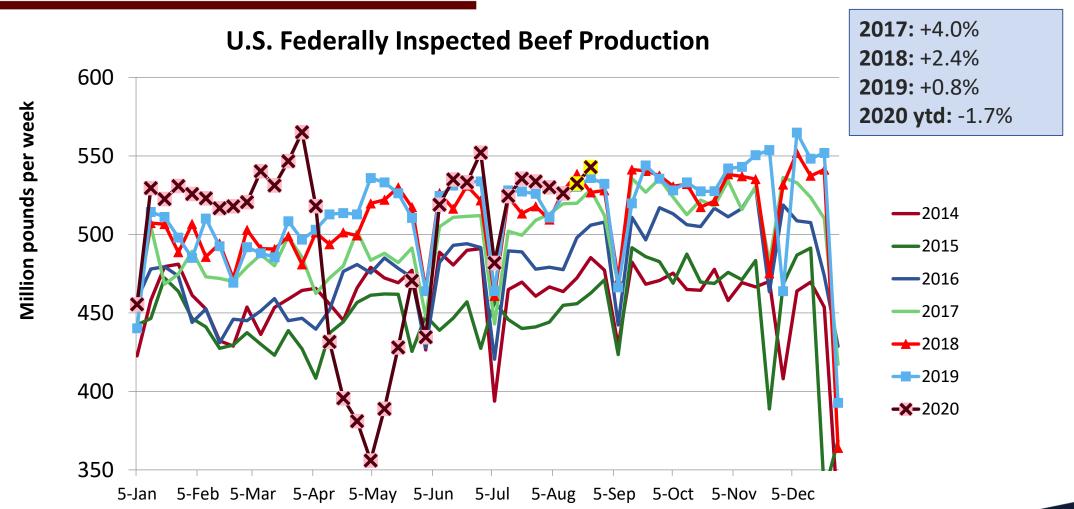
#### Quarterly U.S. Beef Production Forecast



2016: 11.44 MMT, +6.4%

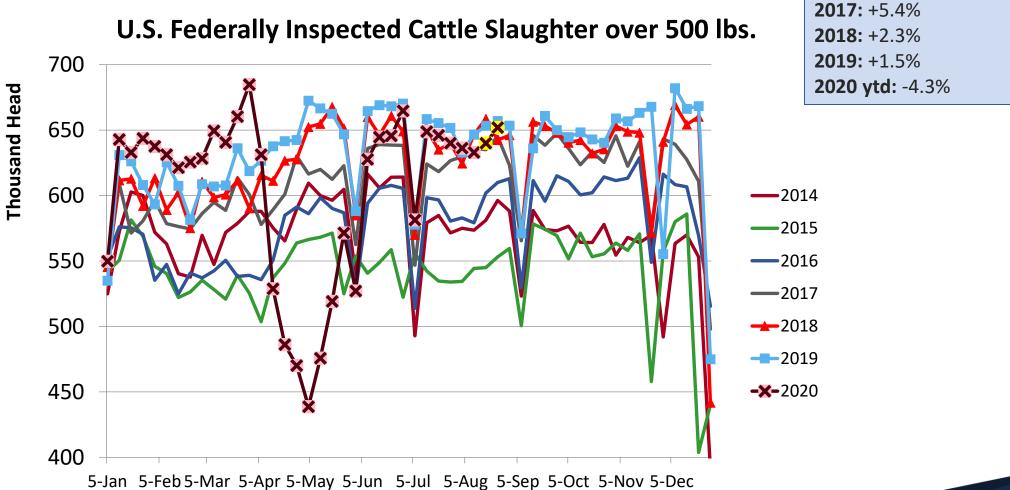
2017: 11.88 MMT, +3.8%

## Total U.S Beef Production rebounding since early May and surpassed yearago levels again in mid-June, above year-ago levels for 9 out of the last 11 weeks



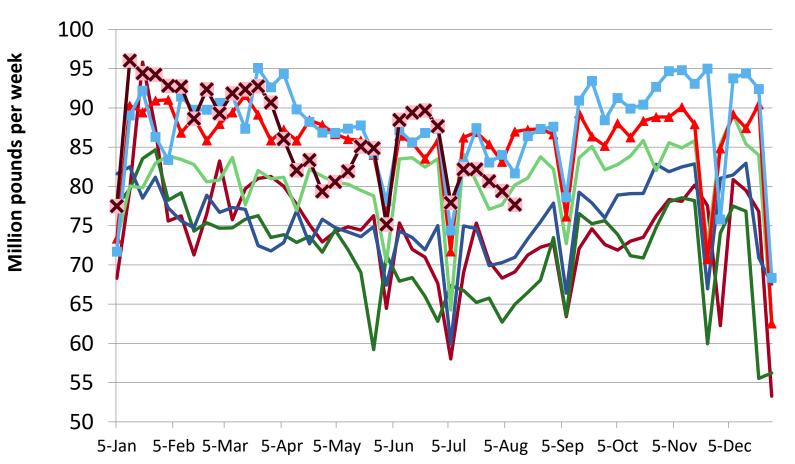


## U.S. Cattle Slaughter



#### U.S. <u>non-fed</u> beef production





**2017:** +7%

**2018:** +6%

**2019:** +2.3%

<del>--</del>2014

<del>---</del>2015

<del>---</del>2016

<del>--</del>2017

<del>----</del>2018

<del>---</del>2019

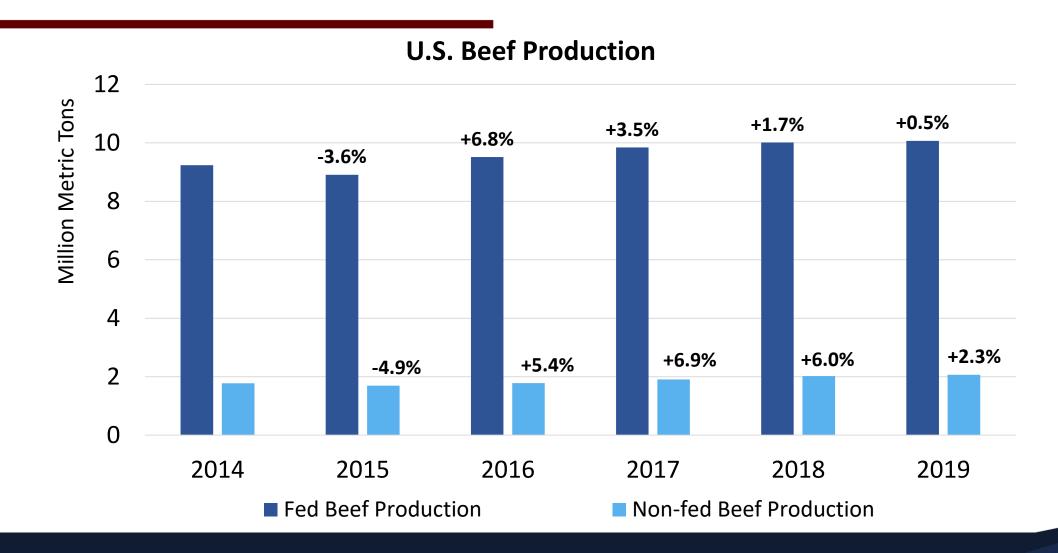
**-X-**2020

**2020 ytd:** -1%



**Source: USDA/NASS** 

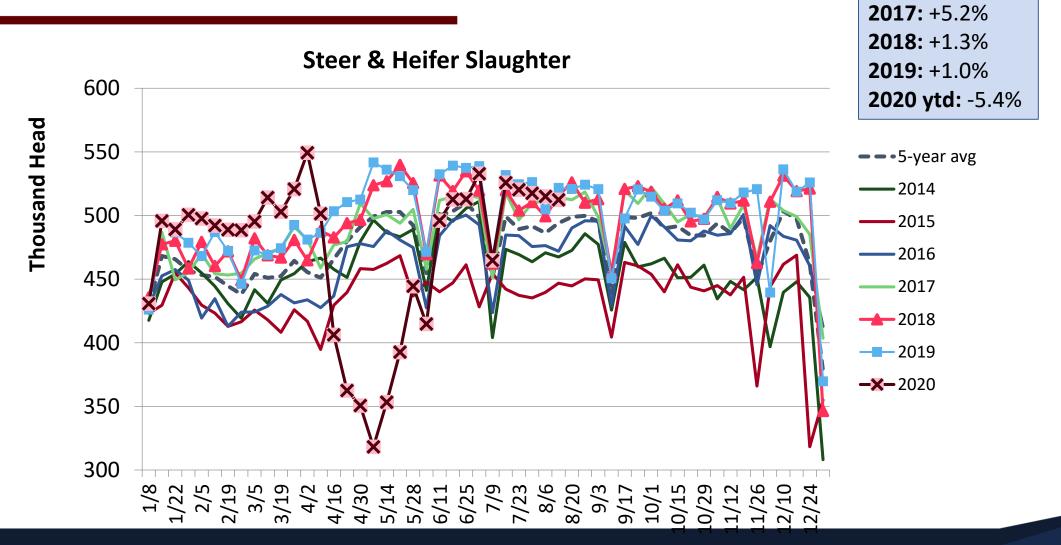
#### Fed beef production accounts for 83% of total U.S. beef production





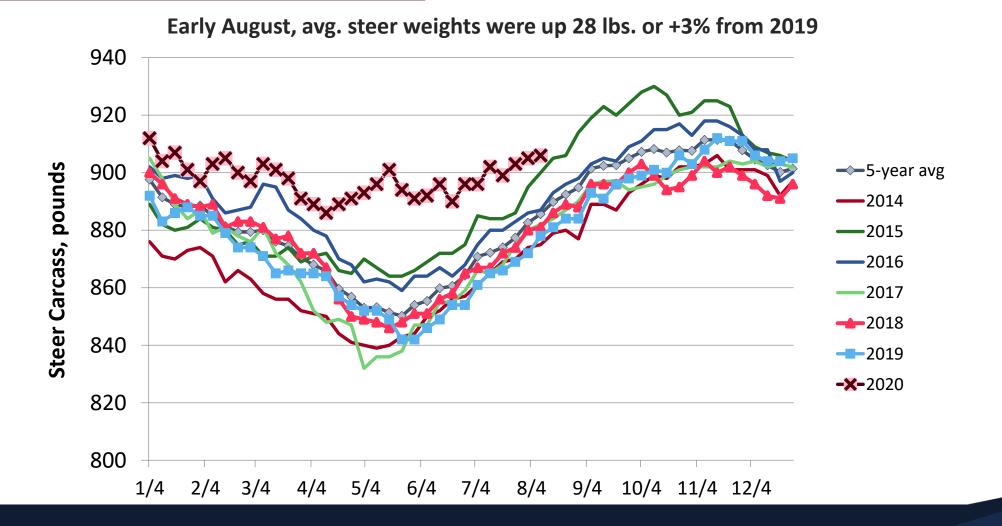
U.S. <u>fed</u> cattle slaughter was up 5% year-over-year during the first quarter of 2020 before the covid-19 related slowdowns and neared year-ago levels again in



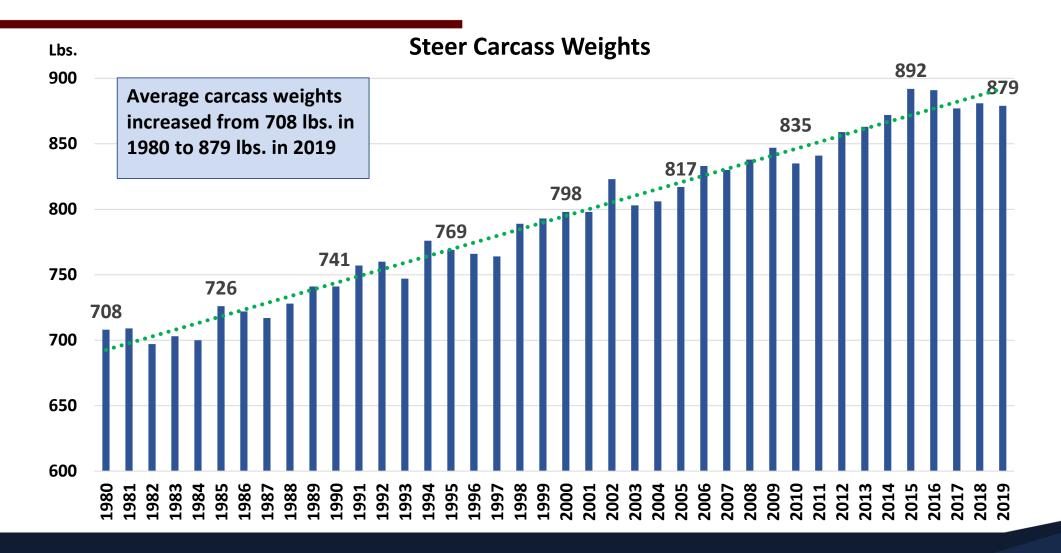




Cattle performance is strong and weights were already trending higher in 2020 before the counter-seasonal increase in April and May on slower slaughter and thus more days on feed. Weights have been trending seasonally higher since the summer and remain elevated with continued longer days on feed.

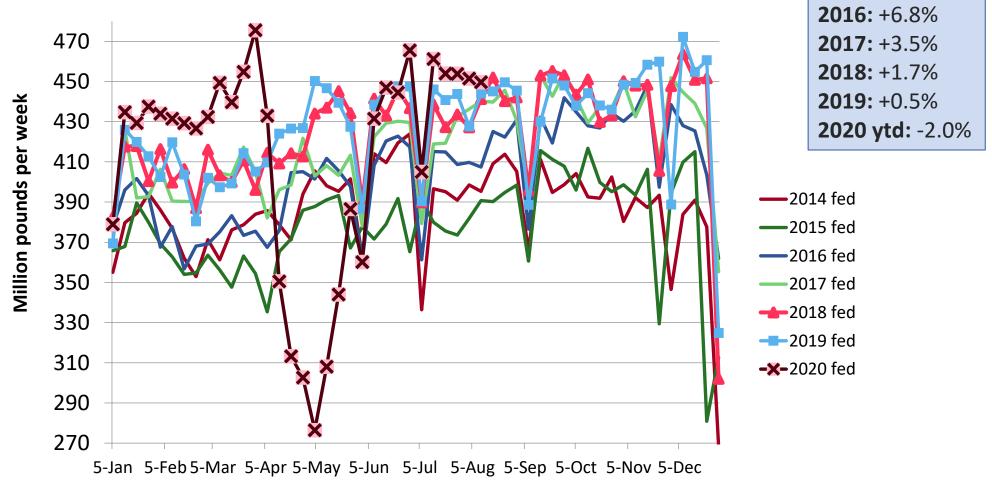


#### Historical Increase in Carcass Weights





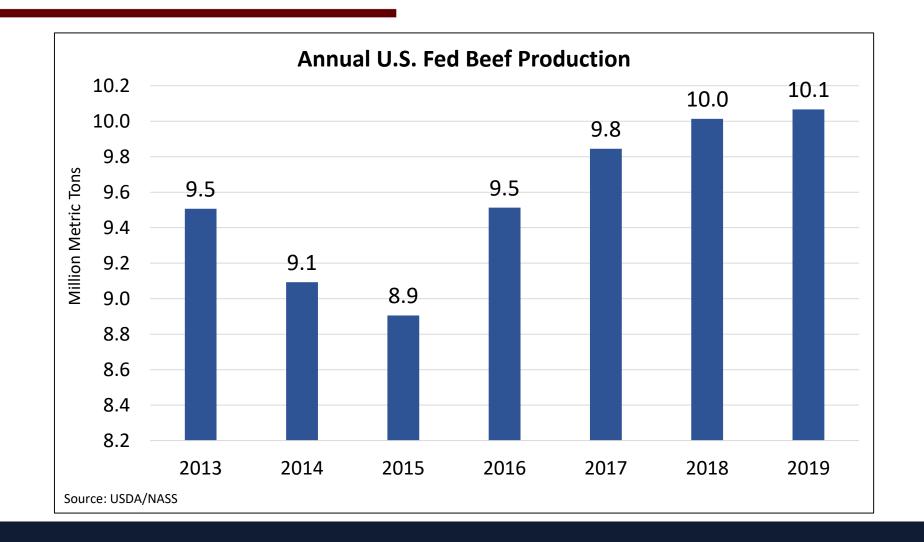
Following a slight increase in 2019, U.S. <u>fed</u> beef production was up nearly 8% in the first quarter of 2020 before supplies tightened due to covid-19 Production has again been above year-ago levels again since mid-June





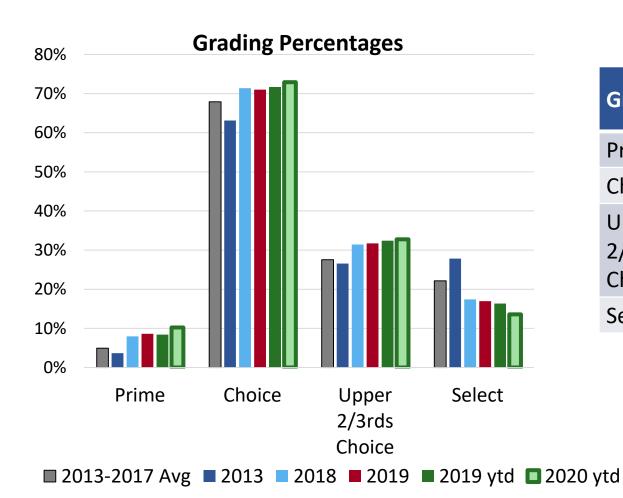
Source: USDA/NASS

## The U.S. is the largest producer of grain-fed beef in the world





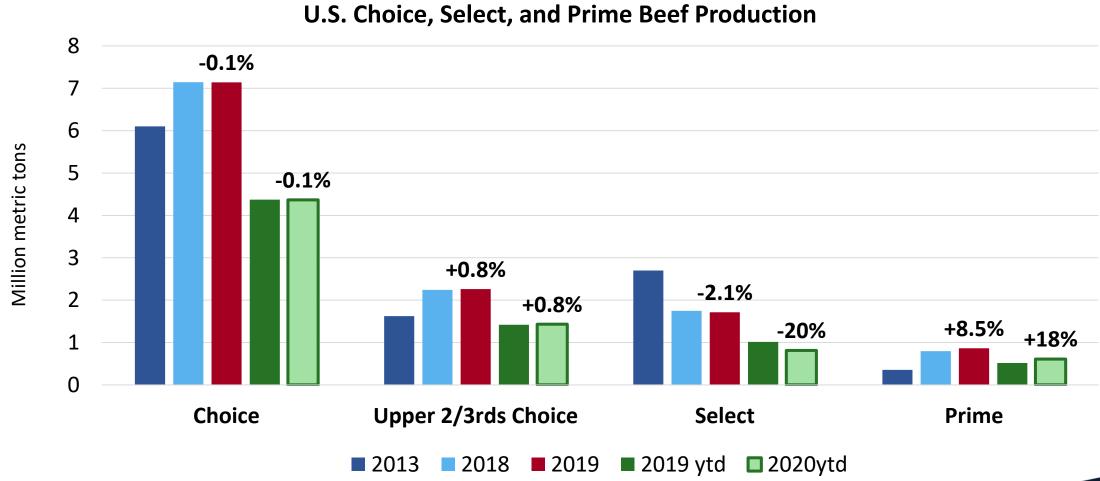
## Prime and Choice grading percentages continue to increase



Grade	2013- 17 Avg	2013	2018	2019	2019 ytd	2020 ytd
Prime	4.9%	3.7%	7.95%	8.6%	8.4%	10.2%
Choice	67.9%	63.1%	71.4%	71.0%	71.6%	72.9%
Upper 2/3rds Choice*	27.6%	26.6%	31.4%	31.7%	32.4%	32.8%
Select	22.2%	27.8%	17.4%	16.95%	16.6%	13.6%

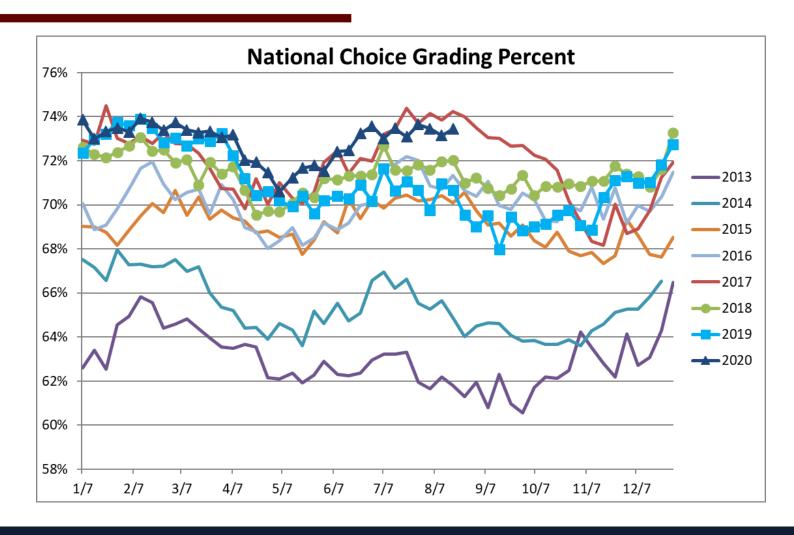


## Higher levels of Prime production, Choice production steady





# More than 70% of fed cattle have been grading Choice on average since 2016 with 2020 ytd Choice grading reaching new highs



**2018:** 71.4%

**2019:** 71.0%

**2019 ytd:** 71.6%

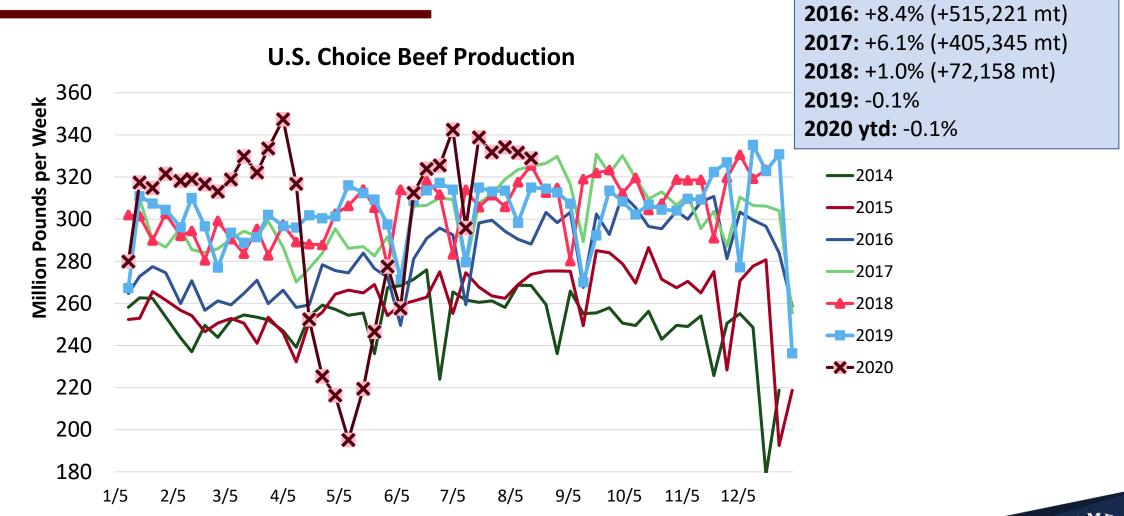
**2020 ytd:** 72.9%



Source: USDA/NASS

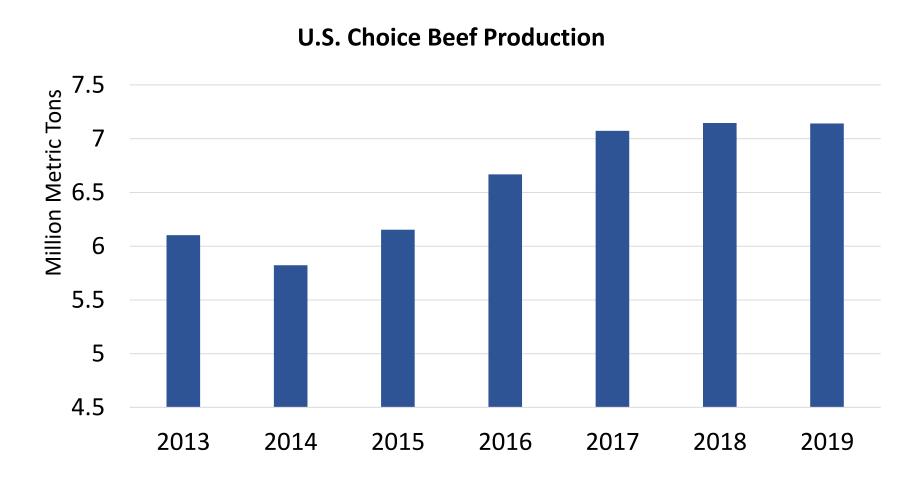
2019 Choice beef production was down slightly compared to increases in recent years, but 2020 production has been significantly higher except for the April – mid-



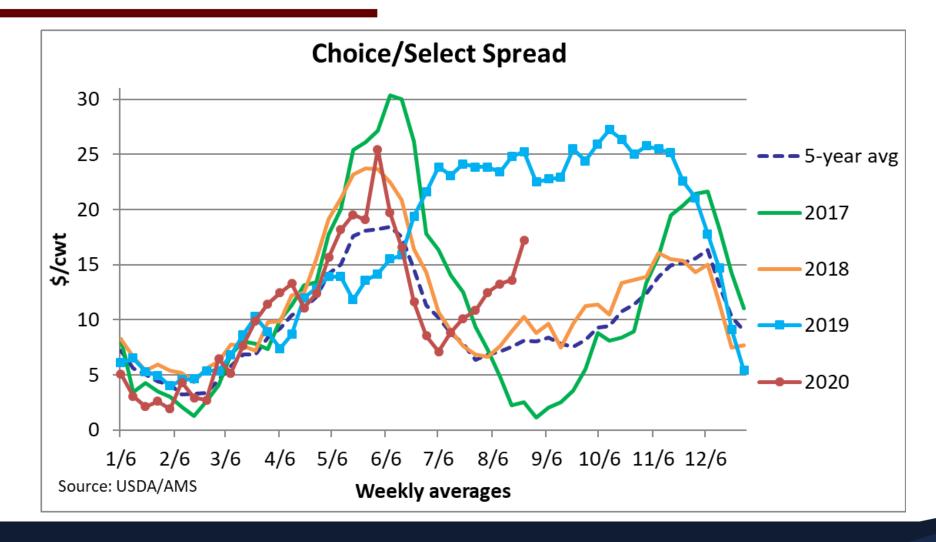




# 2019 Choice beef production was down slightly compared to increases in recent years

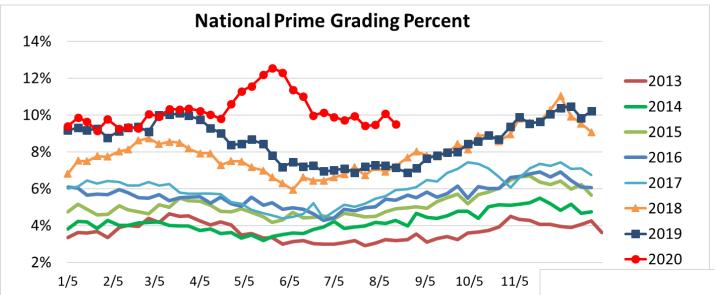


The Choice/Select spread has been trending higher in July and especially late August as demand for Choice grilling cuts picks up ahead of the Labor Day holiday at the beginning of September





### Prime grading percentages continue to be record large in 2020



**2018:** 7.95%

2019: 8.6%

**2019 ytd:** 8.4%

**2020** ytd: 10.2%

### **Prime Production:**

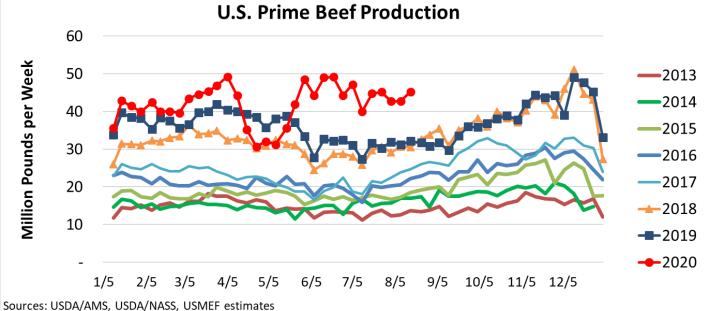
Source: USDA/AMS

**2017:** +10% (+55,800 mt)

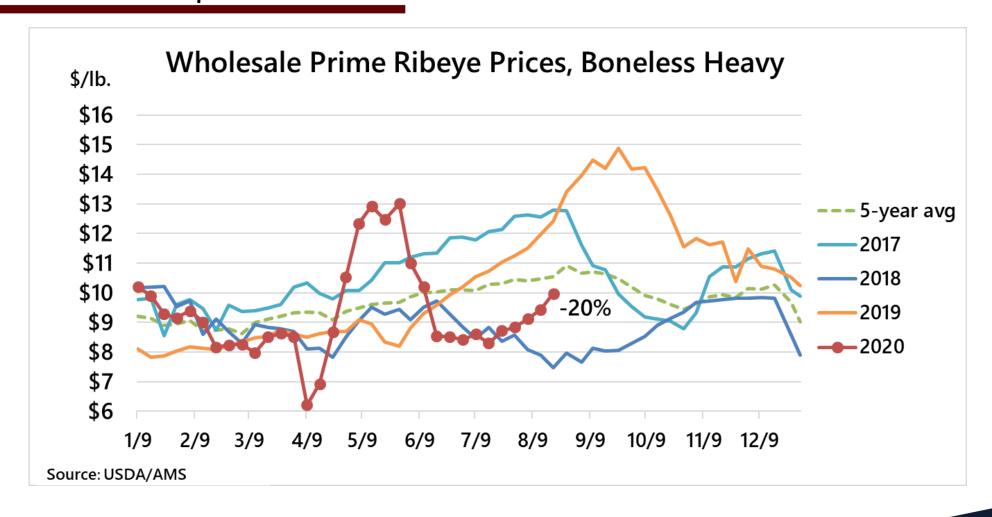
**2018:** +35% (+204,800 mt)

**2019:** +8.5% (+67,500 MT)

**2020 ytd**: +18%

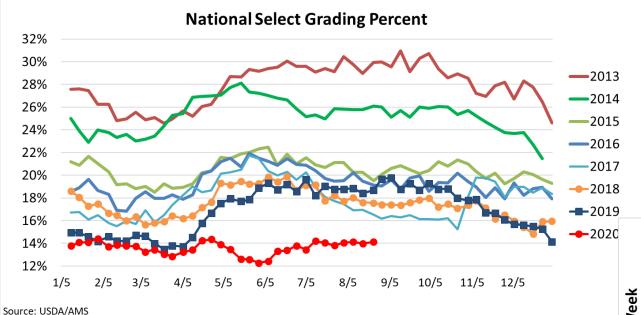


Wholesale Prime ribeye prices surged from mid-April through May on limited plant capacity but have remained below year-ago levels since correcting lower in June due to increased production and slower foodservice demand





# Select grading percentage lower in recent years as improved genetics and feed management lead to higher Choice and Prime percentages



**2018:** 17.4%

**2019:** 16.95%

**2019 ytd:** 16.6%

**2020 ytd:** 13.6%

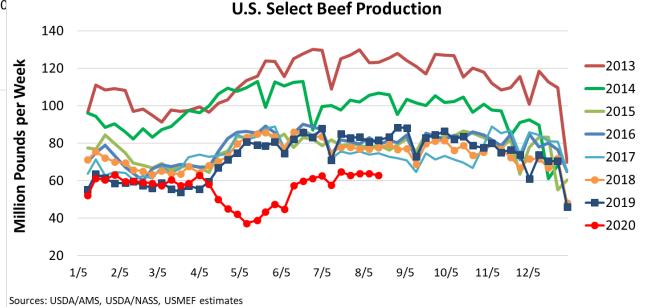
#### **Select Production:**

**2017:** -4% (-80,500 mt)

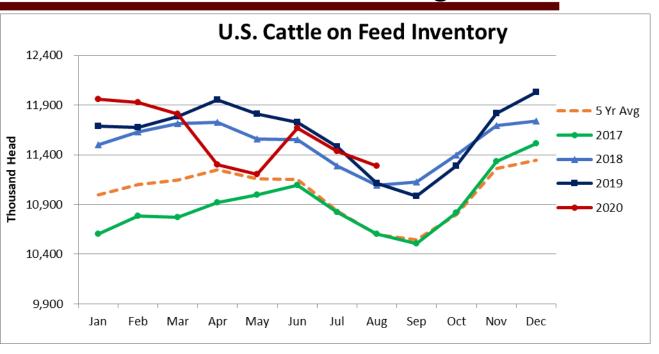
**2018:** -1% (-13,700 mt)

**2019:** -2% (-36,600 mt)

**2020 ytd: -20%** 

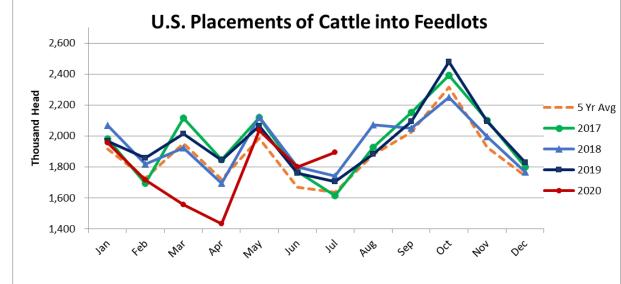


Placements normalized in May and June as slaughter started to rebound, and July placements were higher year-over-year resulting in the highest cattle on feed inventory on record for the month of August

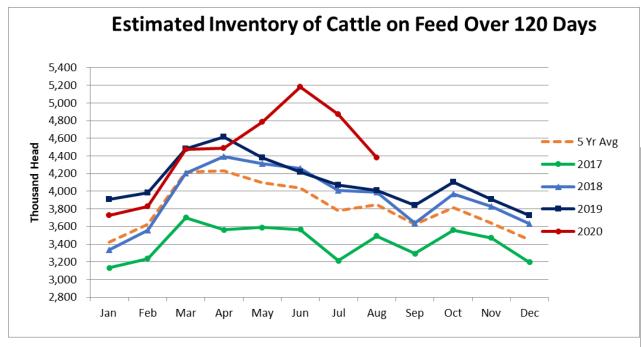


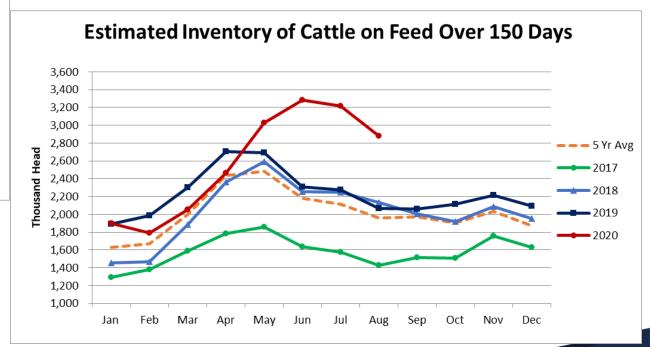
Placements for July were up 11% from 2019 and up 16% from the previous 5-year average following lower year-over-year placements from Jan - May

The August cattle on feed inventory was up 1.5% from 2019 and up 6.5% from the previous 5-year average



Supplies of slaughter-ready cattle (over 120 days on feed) reached record levels on June 1 due to slower marketings/slaughter in April and May. The number of cattle on feed over 120 and over 150 days adjusted lower in July and August but remained significantly higher than last year





Cattle prices were driven lower by the reduction in plant capacity, but the futures market rebounded from the March/April lows as slaughter recovered, with the rebound also supported by continued strong domestic retail demand and affordable corn prices

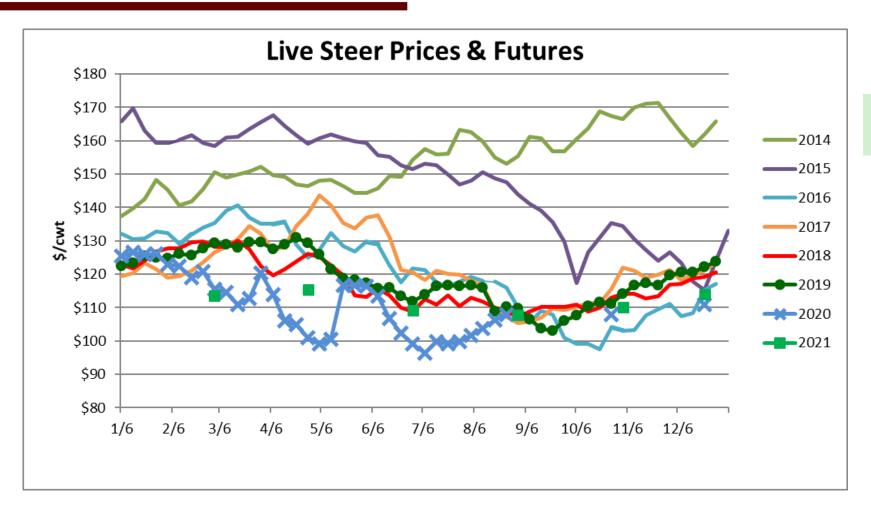
#### October live cattle contract



#### September feeder cattle contract



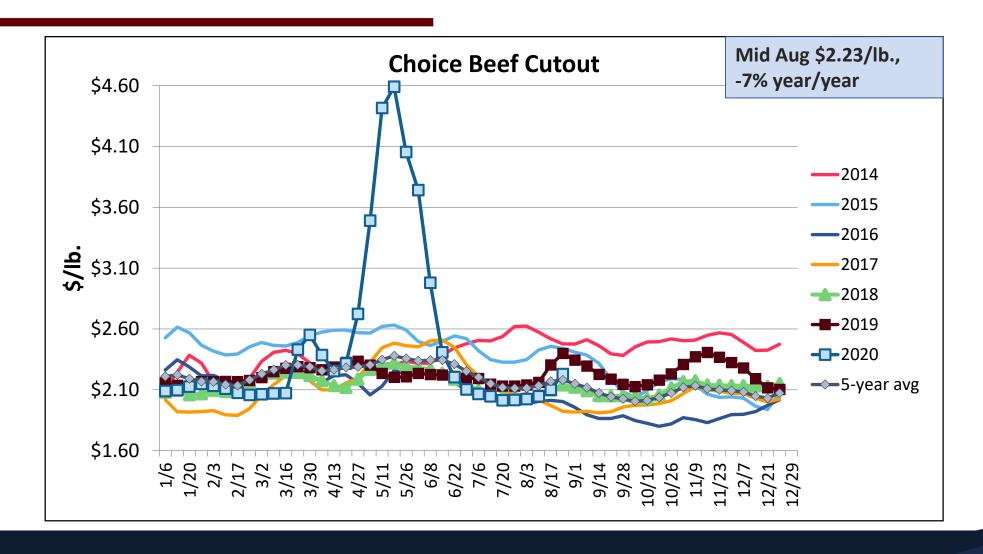
Cash and futures currently reflect the overall market concerns about covid-19 disruptions and still abundant numbers of cattle on feed, but strong retail demand and a rebound in exports in July and August are supporting prices, and the U.S. has the supply advantage with tight global protein supplies and sharply reduced Australian slaughter



Cash prices down 2% from 2019 in mid August

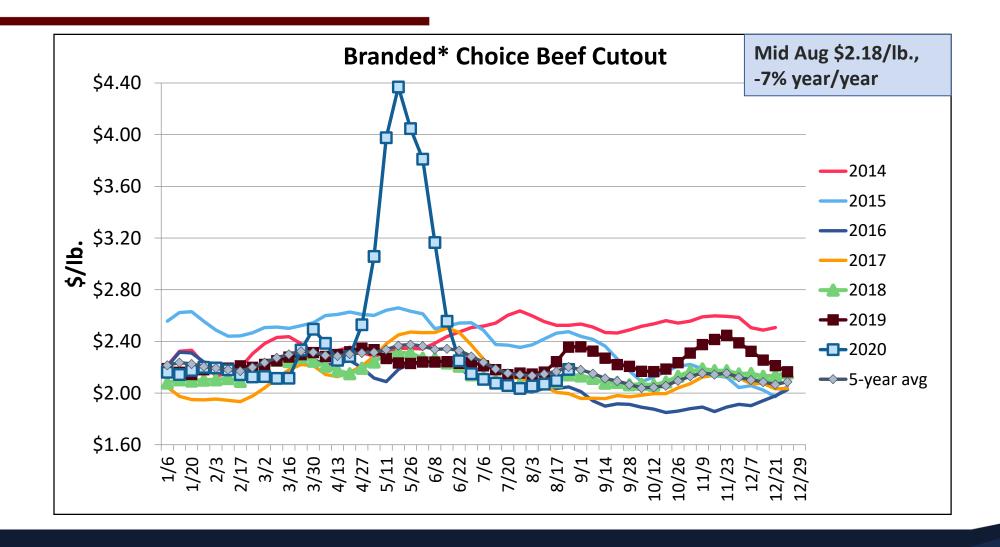


# The Choice Beef cutout has been trending higher in August on strong retail demand ahead of the Labor Day holiday





### **Branded Choice Beef Cutout**





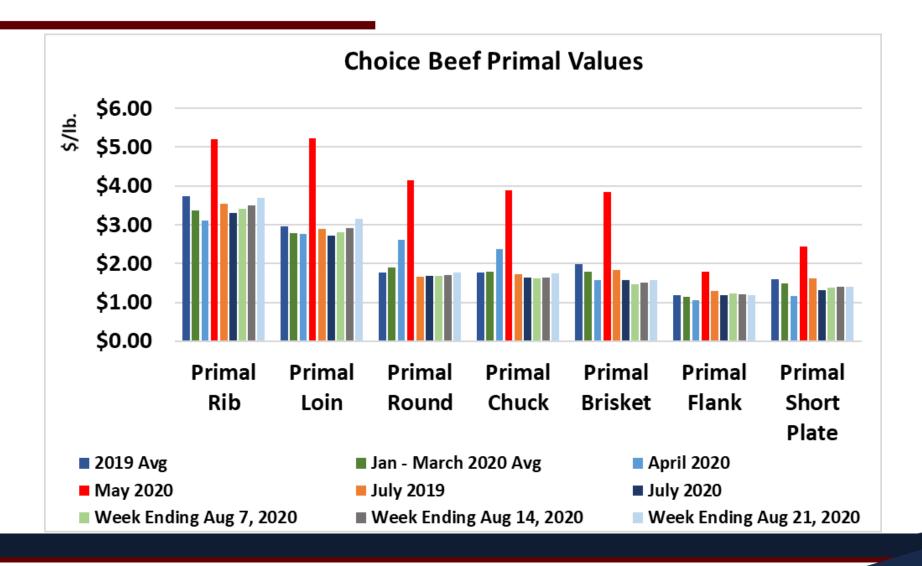
## Choice Cutout & Primal Values

### Fob plant wholesale primal values in U.S. \$/pound

Week ending:	8/23/2019	8/21/2020	Year-over- Year Change	Jan – mid Aug 2019 Avg	Jan – mid- Aug 2020 Avg	Year-over- Year Change
Choice Cutout	2.40	2.23	-7%	2.22	2.48	+12%
Primal Rib	4.03	3.69	-8%	3.65	3.68	+1%
Primal Chuck	1.89	1.75	-7%	1.76	2.12	+21%
Primal Round	1.89	1.78	-6%	1.73	2.24	+30%
Primal Loin	3.26	3.16	-3%	3.01	3.20	+6%
Primal Brisket	2.01	1.57	-22%	1.95	1.97	+1%
Primal Short Plate	1.68	1.40	-17%	1.63	1.53	-6%
Primal Flank	1.35	1.19	-12%		1.26	+3%
50/50 Beef trimmings	1.00	0.49	-51%	0.80	0.82	+2%



Wholesale values for all primals except the flank (popular at foodservice) increased in August





## U.S. Beef Cut Prices

Cut	Price (\$/lb.)	Change from 2019 (%)
Bone-in Short Rib	\$4.43	-18%
Bone-in Chuck Short rib	\$4.00	+23%
Chuck Roll 1 x 1	\$2.94	+1%
Ribeye Boneless heavy	\$8.30	-8%
Strip Loin Boneless 0 x 1 (NY Strip)	\$6.78	-12%
Short Plate Primal	\$1.40	-17%

**Source: USDA/AMS** 

All prices are for commodity Choice cuts, FOB plant for the week ending Aug 21, 2020



The spread between the Choice cutout and live steer prices reached the widest level in years in April and May as plant capacity was constrained by covid-19 related slowdowns but narrowed from June to August as slaughter rebounded



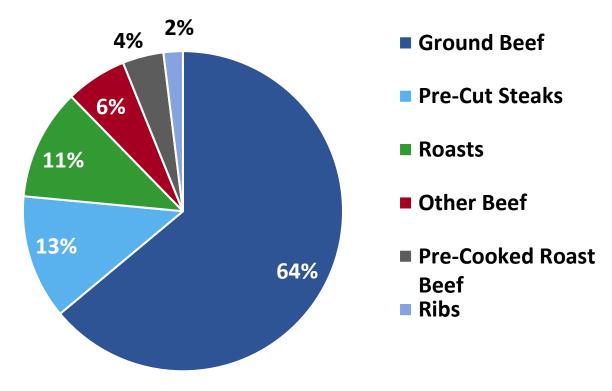


## U.S. Beef Utilization at Foodservice



- Domestically, about 60% of U.S. beef is used by foodservice vs. 40% for retail
- Ground beef accounts for the largest volume share of beef sold at foodservice at 64% in 2018
- Pre-cut steaks and roasts are the next largest categories
- In 2018, there was increasing use of emerging steak cuts (flat iron, petite tender medallions, tri-tips), briskets, and petite tender roasts at foodservice

#### 2018 Beef Volume at Foodservice

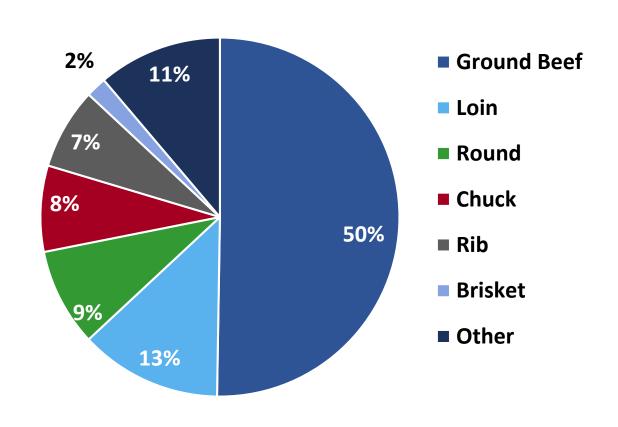


# Ground beef is also the top beef item at retail



- 2018 retail sales volume was up 5% year-overyear, driven by growth for ground beef, ribs, and loins
- In 2018, ground beef volume accounted for 50% of beef sold at retail
- For cuts only, the top ten items sold at retail by volume from January – July 2018 were:
  - Ribeye Steak
  - Strip Steak
  - Chuck Center Roast
  - Stew Meat
  - T-Bone Steak
  - Top Round First Steak
  - Top Sirloin Steak
  - Blade Chuck Roast
  - Cubed Steak
  - Tenderloin Steak

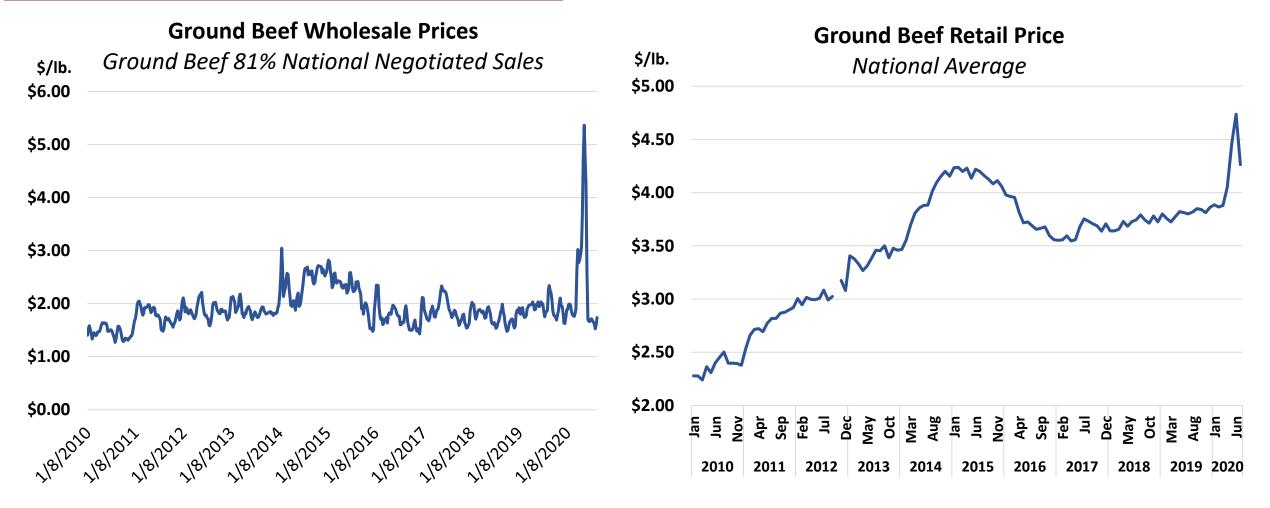
#### 2018 Beef Volume at Retail



Source: NCBA

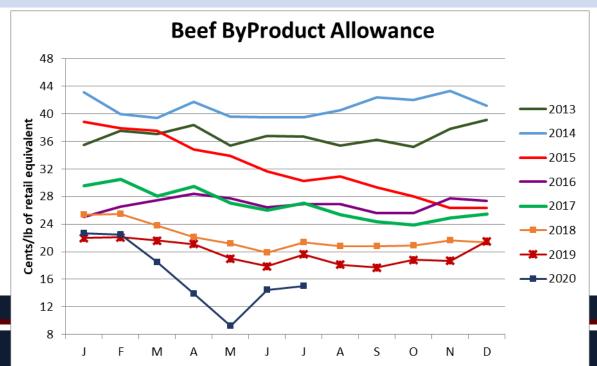
U.S. wholesale ground beef prices surged to new records in April/May but have since normalized, while ground beef retail prices were record high in June and remained up significantly year-over-year in July



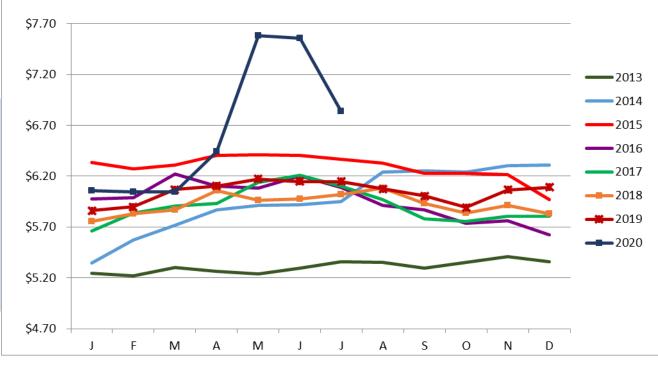


## **Beef Retail Values**

The 2019 Choice beef retail price average was up 2% from 2018 at \$6.04/lb. July 2020 beef retail prices dropped 10% from the record highs in May/June when retail prices adjusted higher to accommodate the temporary increase in wholesale values. July retail prices were up 11% from the previous year at \$6.84/lb.



#### U.S. Choice Beef Retail Values, \$/lb.



The 2019 average beef byproduct value (which includes hides) was down 10% from 2018. In July 2020, the beef byproduct value was up 3% from the previous month but was down 23% from last year.



The beef-to-pork price premium reached a record high in May and June as beef retail prices adjusted to the surge in wholesale beef prices in April/May because of covid-19 related slowdowns in production

