

NDSU

EXTENSION

EXTENDING KNOWLEDGE >> CHANGING LIVES



Cattle Situation and Outlook

Tim Petry, Livestock Marketing Economist

www.ndsu.edu/livestockeconomics

March 2021

Agribusiness and
Applied Economics

ANSC486 3-4-21.pptx

Agriculture By the Numbers

March 2021

NDSU Extension Agribusiness and Applied Economics

U.S. and N.D. Beef Cow
Herds Decline Cyclically

NDSU Extension Projects
Commodity Prices for 2021

The Battle for Acres is Back

Texas Weather Leads to
Decline in U.S. Ethanol
Production

Economic Uncertainty
Persists in 2021

U.S. and N.D. Beef Cow Herds Decline Cyclically

By Tim Petry, NDSU Extension Livestock Economist

The U.S. Department of Agriculture's National Agricultural Statistics Service released the annual "Cattle" inventory report on Jan. 29, 2021. It is available at <https://usda.library.cornell.edu/concern/publications/h702q636h>.

As expected, cyclical beef cow herd liquidation continued. Beef cow numbers peaked in 2018, with liquidation occurring during 2019 and 2020. U.S. beef cows on Jan. 1, 2021, at 31.16 million head, were down 181,000 from the 31.34 million on Jan. 1, 2020. That is a decline of 533,100 head in the past two years.

www.ag.ndsu.edu/farmmanagement/agriculture-by-the-numbers-newsletter

Monthly Agricultural Markets Webinar Series

To learn more about the webinar series and to register for future webinars, visit <https://www.ag.ndsu.edu/farmmanagement/outlook>. Recordings and presentations from completed webinars will be archived on that page.

Webinars are scheduled for:

March 11, 2021

April 15, 2021

May 13, 2021

Thursday 1-2 pm

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EXTENDING KNOWLEDGE >> CHANGING LIVES
EXTENSION AGRIBUSINESS

- **PRICE CYCLES**
 - Use for long run planning
- **SEASONAL PRICE PATTERNS**
 - Most important marketing tool
 - Reason for price risk management strategies
- **BOTH CAN BE AFFECTED BY UNEXPECTED EVENTS**
 - **COVID-19**
 - Tyson packing plant fire-2019
 - Drought
 - Volatile corn prices
 - BSE-2003



Need To Know Your Cost Of Production

www.ag.ndsu.edu/livestockeconomics/Budgets



Cost-Return Projection -- Beef Cow-Calf Enterprise (Per Cow), 2021 ¹

	N.D. Avg.	Your Numbers
VARIABLE COST PER COW:		
1. Summer Pasture	\$ 135.00	\$
2. Hay--silage	180.00	.....
3. Other feed	30.00	.....
4. Protein and Mineral	25.00	.....
5. Hired Labor, Custom Hire	20.00	.....
6. Veterinary, Drugs, and Supplies	30.00	.....
7. Utilities, Fuel, and Oil	25.00	.....
8. Facilities and Equipment Repairs	40.00	.....
9. Breeding Charge	10.00	.....
10. Marketing	15.00	.....
11. Miscellaneous	19.00	.....
12. Interest	15.00	.....
A. TOTAL VARIABLE COSTS	\$ 544.00	\$ 0.00
FIXED COSTS PER COW		
13. Depreciation	\$ 30.00	\$
14. Interest	10.00	.....
15. Insurance	10.00	.....
16. Cow interest, death loss	65.00	.....
B. TOTAL FIXED COSTS	\$ 115.00	\$ 0.00
C. TOTAL COSTS PER COW (A + B)	\$ 659.00	\$ 0.00
RETURNS PER COW ²		
	Your Numbers	
	%	x Weight x Price
17. Steers: .45 x 590 x 1.65	 x	\$ 438.08
18. Heifers: .26 x 570 x 1.40	 x	207.48
19. Cull cows: .14 x 1300 x 0.55	 x	100.10
20. Cull heifers: .05 x 900 x 1.25	 x	56.25
D. GROSS RETURNS PER COW		\$ 801.91
E. RETURN OVER VARIABLE COSTS (D - A)		\$ 257.91
F. RETURN OVER TOTAL COSTS (D - C) ³		\$ 142.91

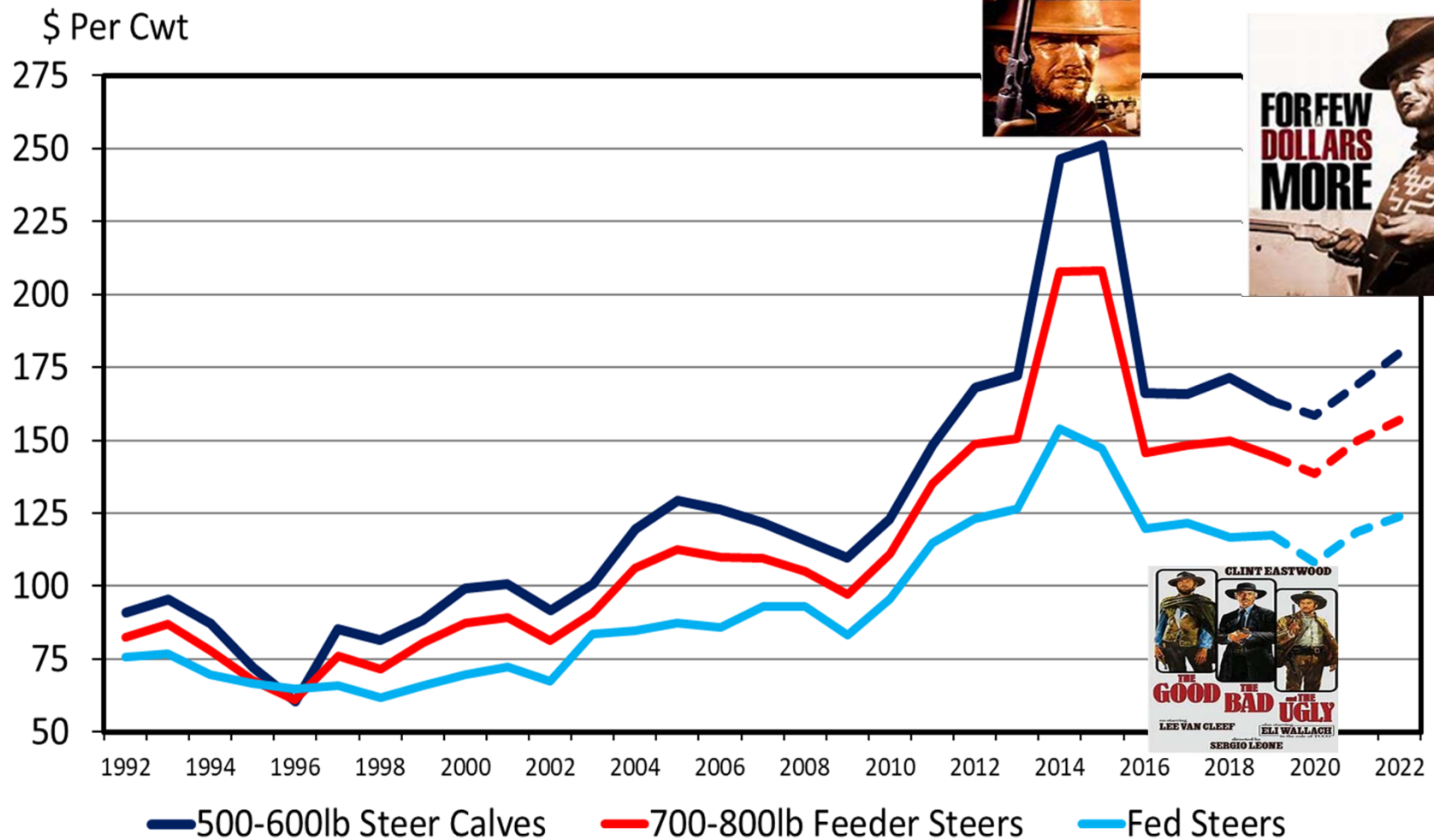
¹ Information in this budget is based on the North Dakota Farm and Ranch Business Management Annual Report, 2019.

² Returns are based on a 90 percent weaning rate, 45 steers sold, 26 heifers sold, 19 heifers kept for replacement, 14 cull cows sold, and 5 cull heifers sold. Prices are projected for fall.

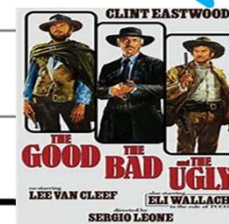
³ Return over total costs is return to unpaid family labor, management, and equity.

CATTLE PRICE CYCLE

AVERAGE ANNUAL CATTLE PRICES

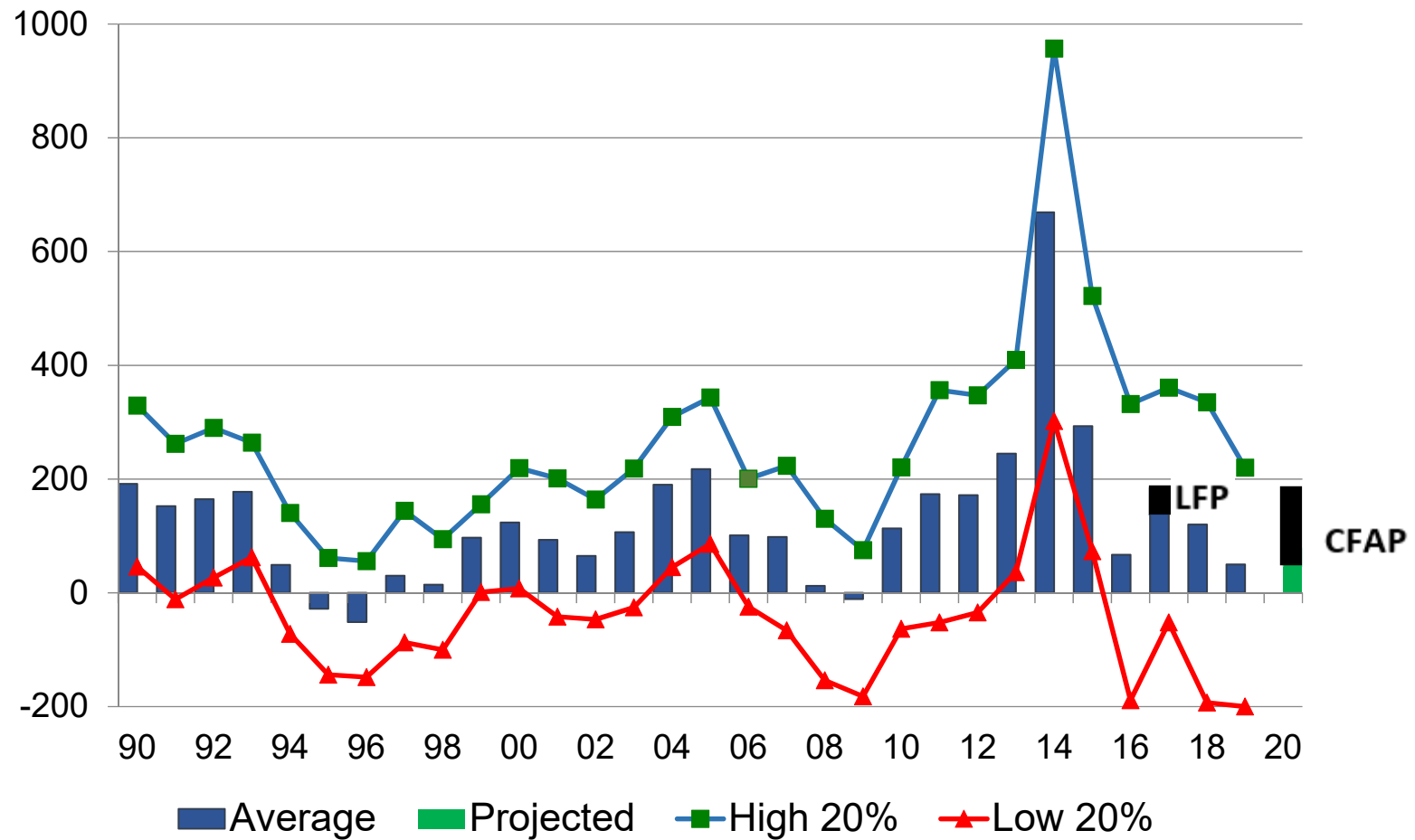


Data Source: USDA-AMS Forecasts by LMIC



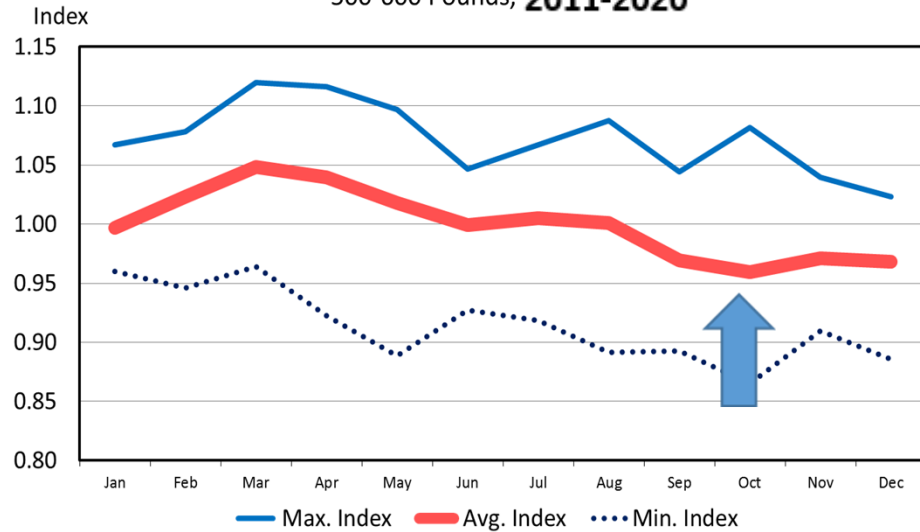
Average Net Return to Labor and Management Per Beef Cow

N.D. Farm Business Mgmt., Excluding Red River Valley

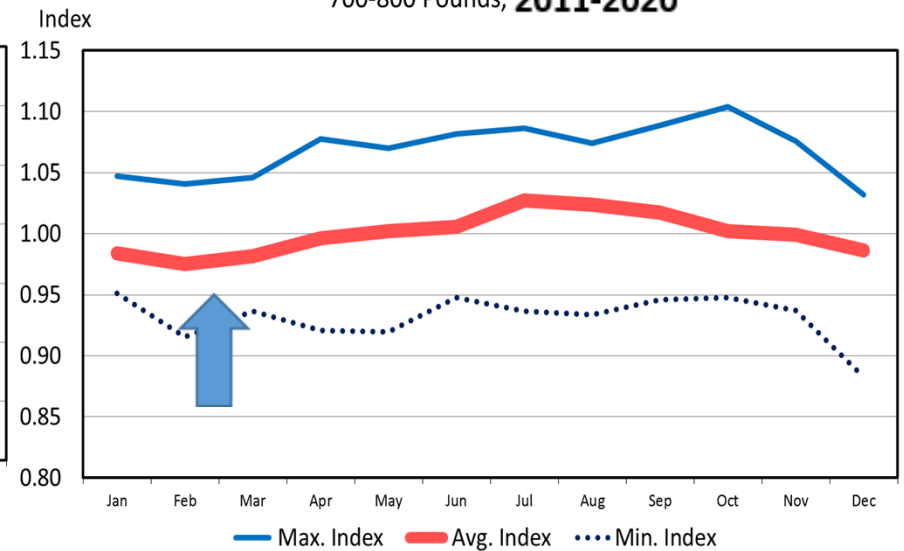


Seasonal Price Patterns are the Most Important Marketing Tool

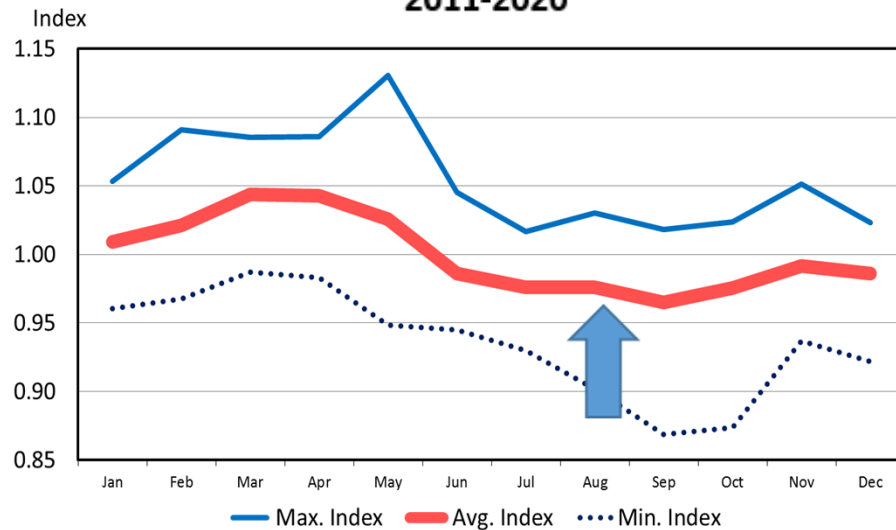
SEASONAL PRICE INDEX – STEER CALVES
500-600 Pounds, **2011-2020**



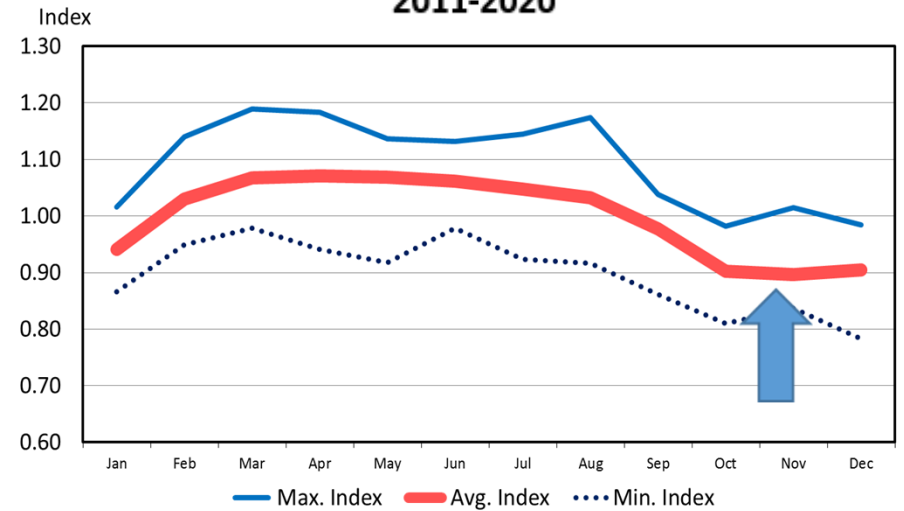
SEASONAL PRICE INDEX – FEEDER STEERS
700-800 Pounds, **2011-2020**



SEASONAL PRICE INDEX – FED STEERS
2011-2020



SEASONAL PRICE INDEX – CULL COWS
2011-2020



World Agricultural Supply and Demand Estimates

U.S Meat Production and Prices

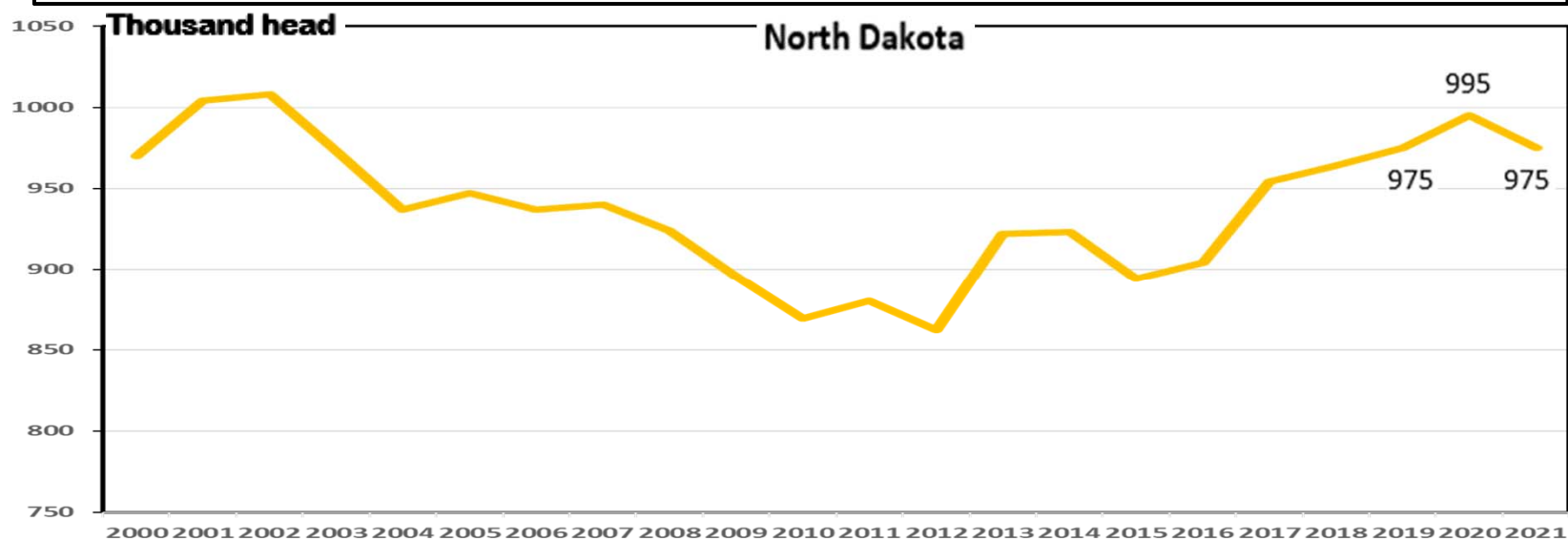
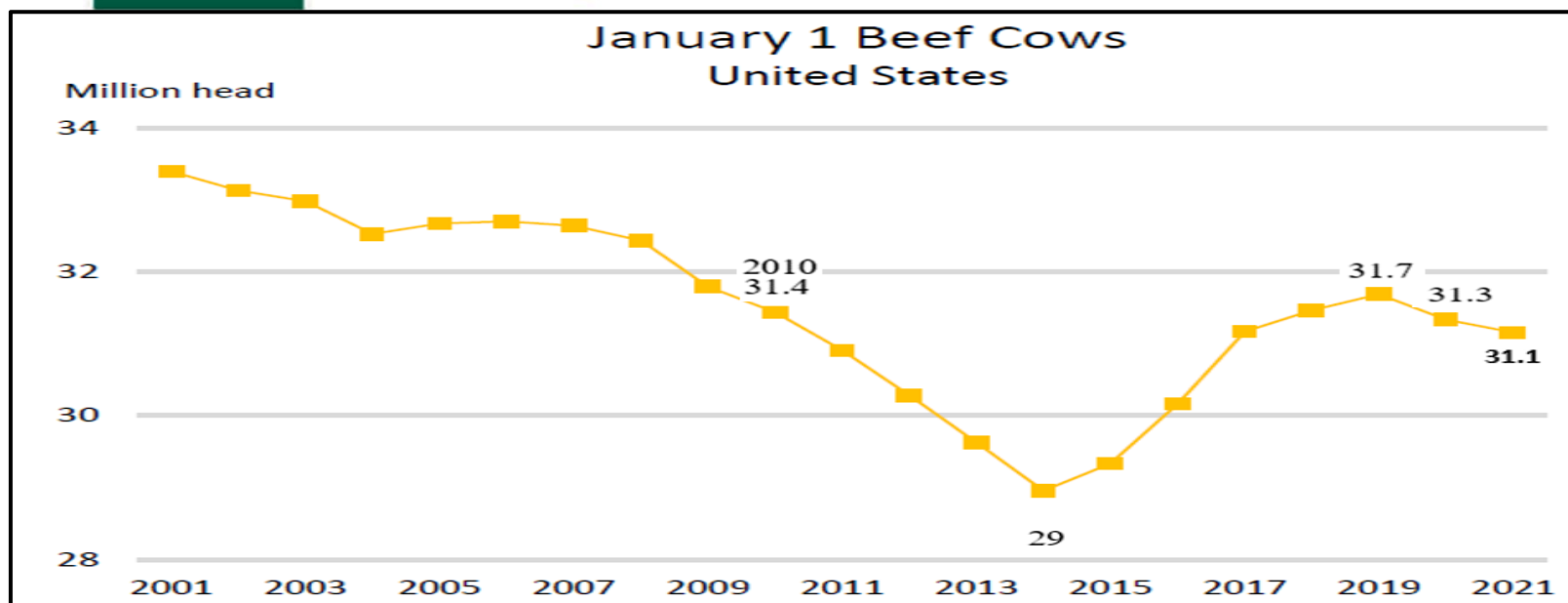
	2014	2015	2016	2017	2018	2019	2020	2021 Forecast
Production	<i>Billion Pounds</i>		<i>Pounds</i>	<i>Pounds</i>	<i>Pounds</i>	<i>Pounds</i>	<i>Pounds</i>	<i>Pounds</i>
Beef	24.25	23.70	25.22	26.19	26.87	27.15	27.15	27.54
Pork	22.84	24.50	24.94	25.58	26.31	27.64	28.30	28.71
Broilers	38.55	40.05	40.7	41.66	42.60	43.91	44.57	44.88
Turkey	5.76	5.63	5.98	5.98	5.88	5.82	5.74	5.73
Total meat	92.17	94.63	97.6	100.17	102.43	105.26	106.52	107.60
Prices	<i>Dollars/cwt</i>		<i>Dollars/cwt.</i>			<i>Dollars/cwt.</i>		
Steers	154.56	148.12	120.85	121.52	117.12	116.78	108.51	114.75
Hogs	76.03	50.23	46.16	50.48	45.93	47.95	43.18	50.50
	<i>Cents/lb.</i>		<i>Cents/lb.</i>			<i>Cents/lb.</i>		
Broilers	104.9	90.5	84.3	93.5	97.8	88.6	73.20	84.50
Turkey	107.6	116.2	117.1	96.1	80.2	89.2	106.5	110.8

 record high

Feb. 9, 2021

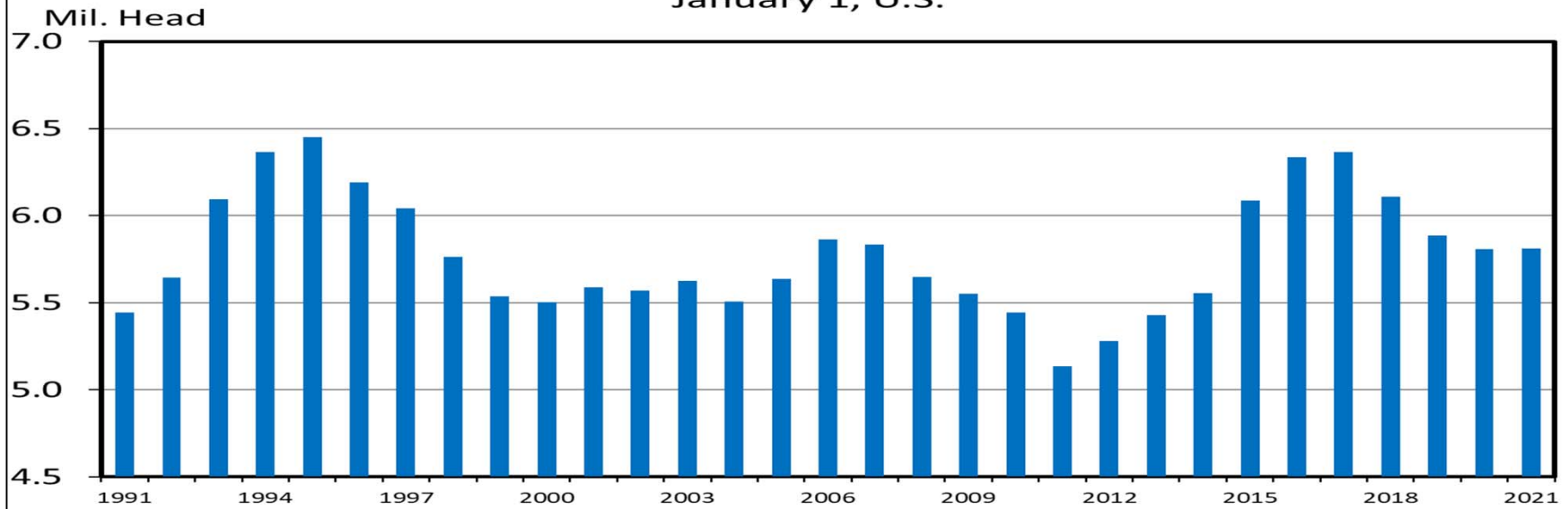


United States Department of Agriculture National Agricultural Statistics Service



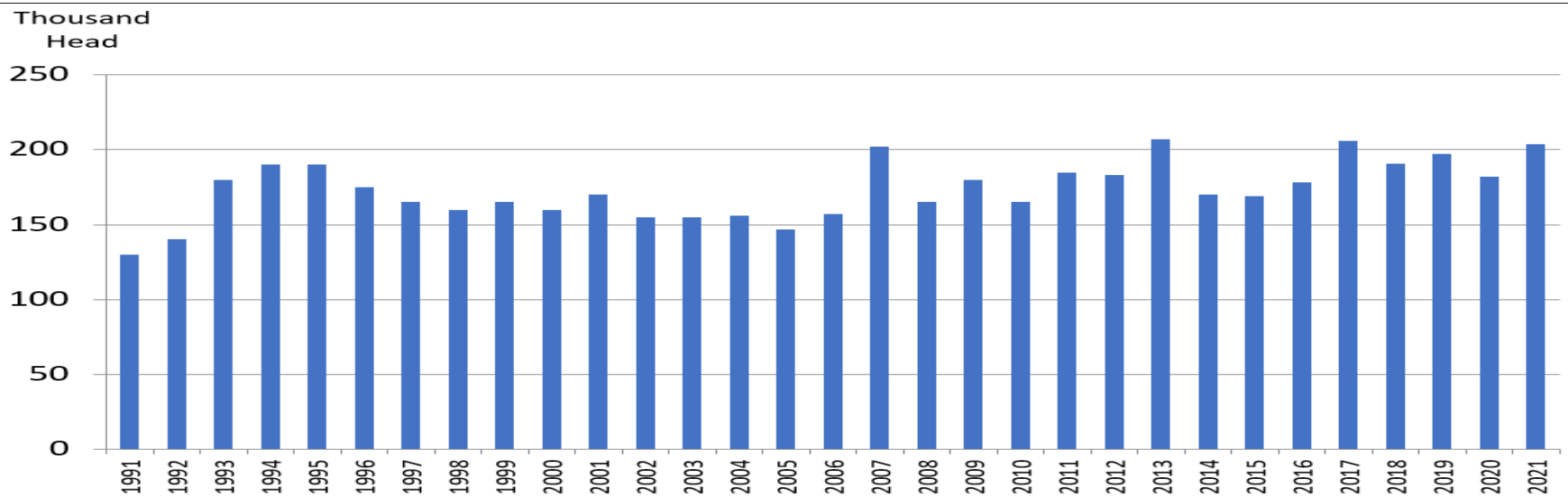
HEIFERS HELD AS BEEF COW REPLACEMENTS

January 1, U.S.



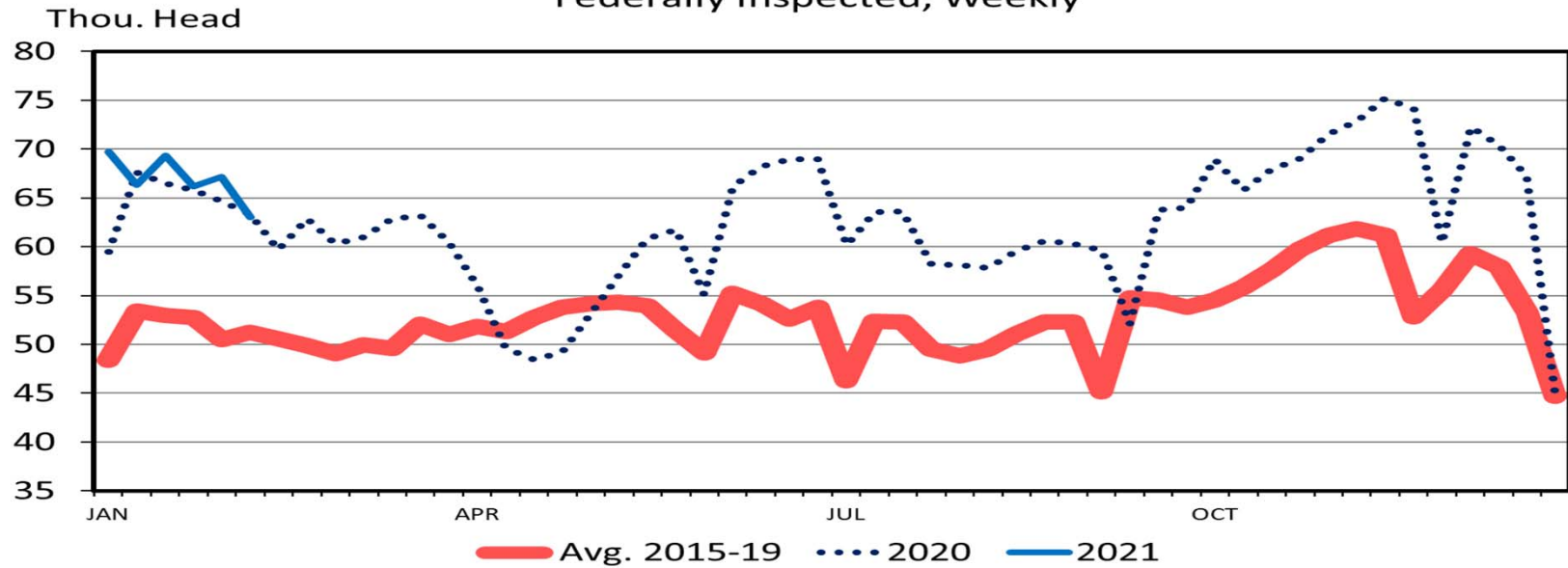
HEIFERS HELD AS BEEF COW REPLACEMENTS

January 1, ND



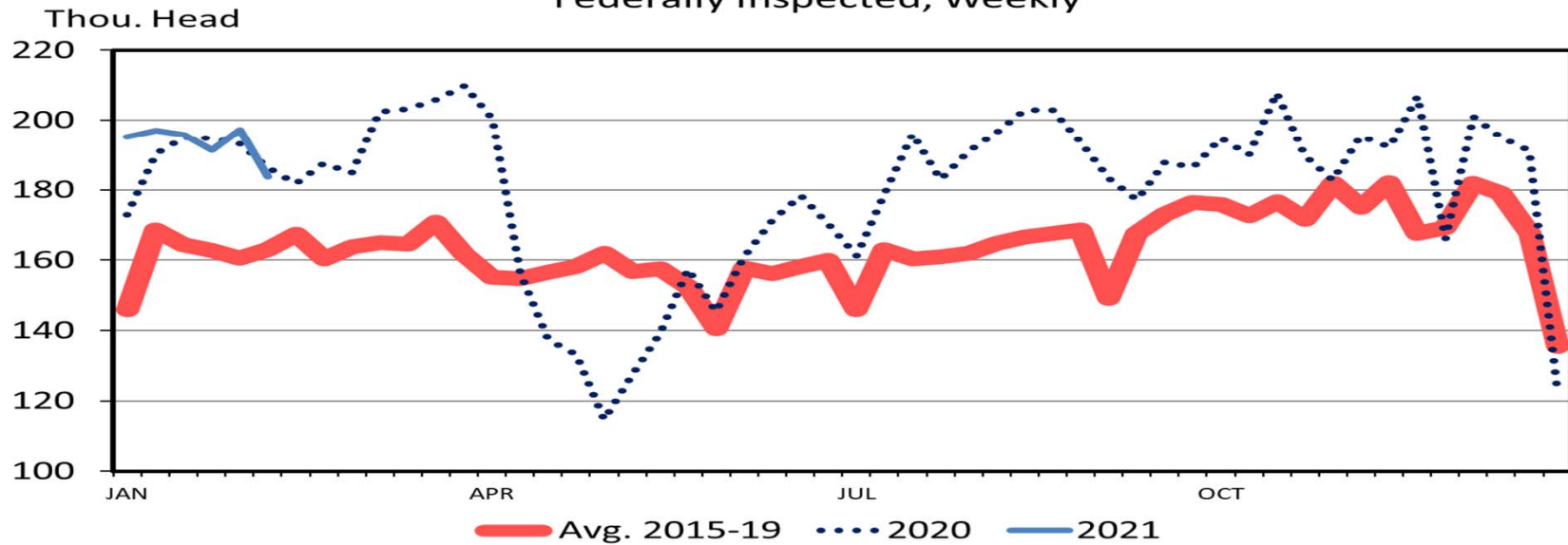
BEEF COW SLAUGHTER

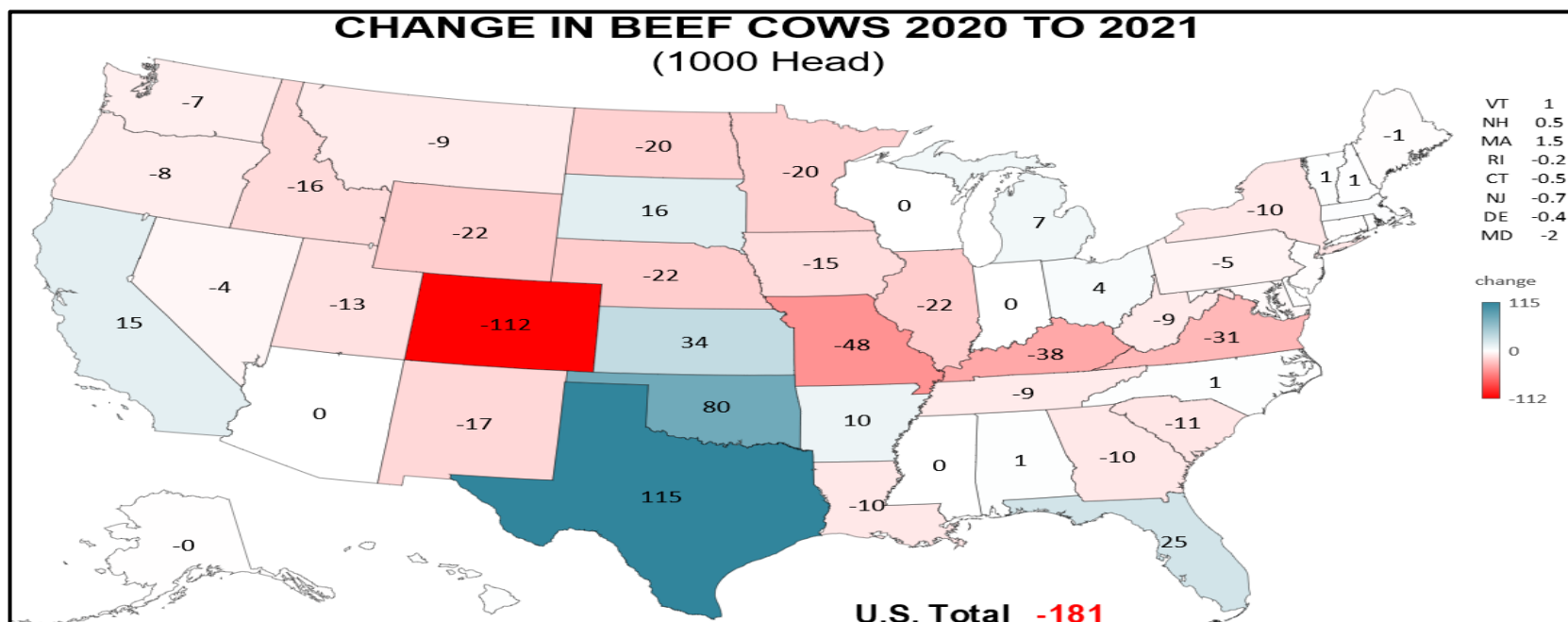
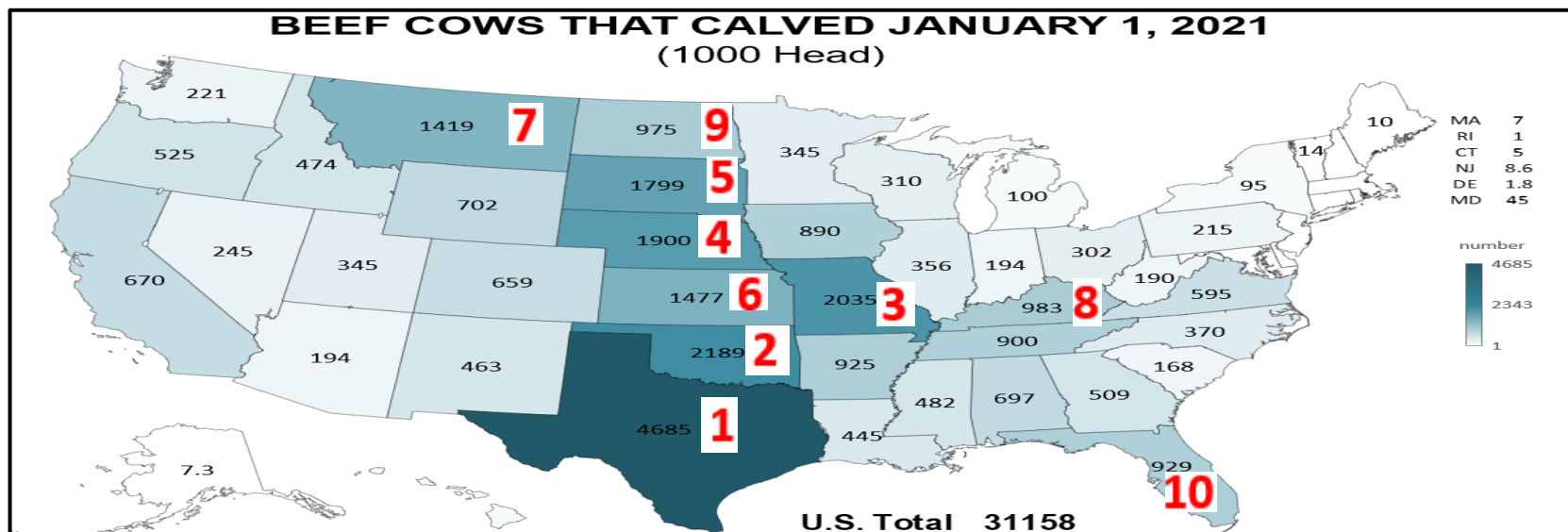
Federally Inspected, Weekly

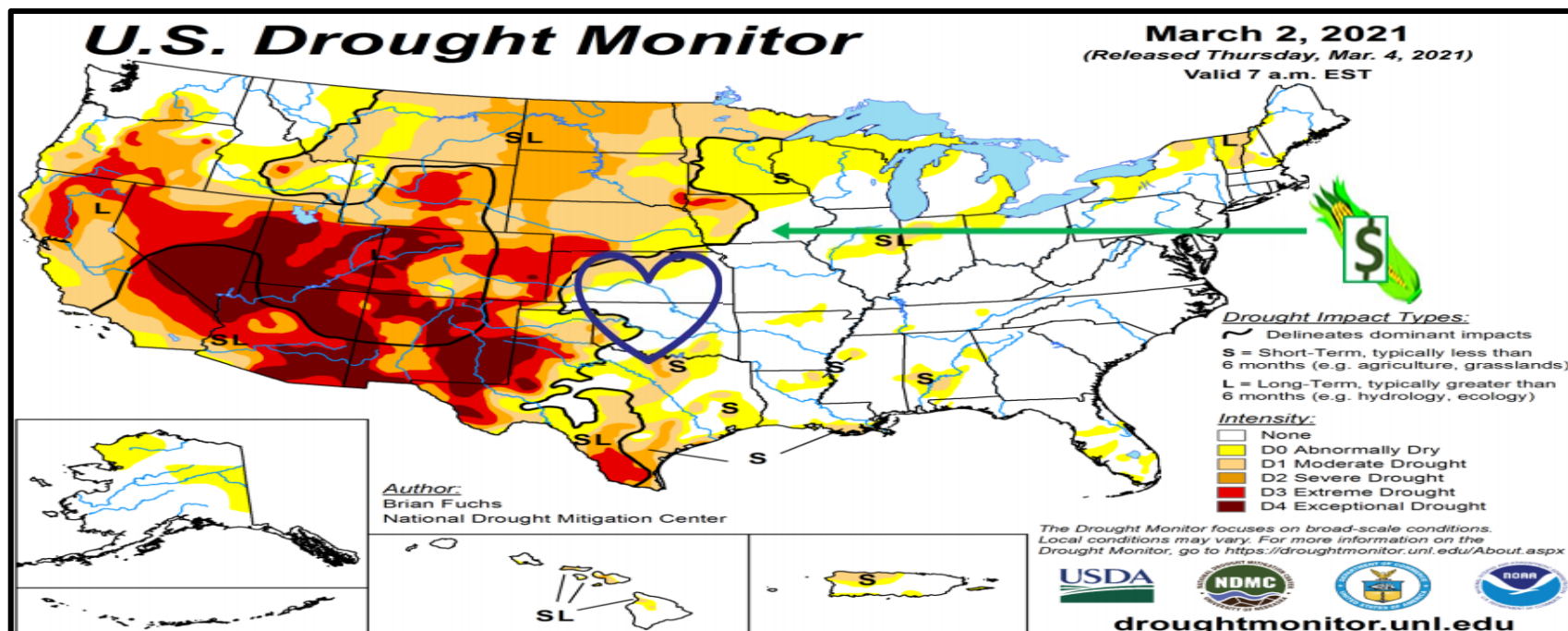


HEIFER SLAUGHTER

Federally Inspected, Weekly





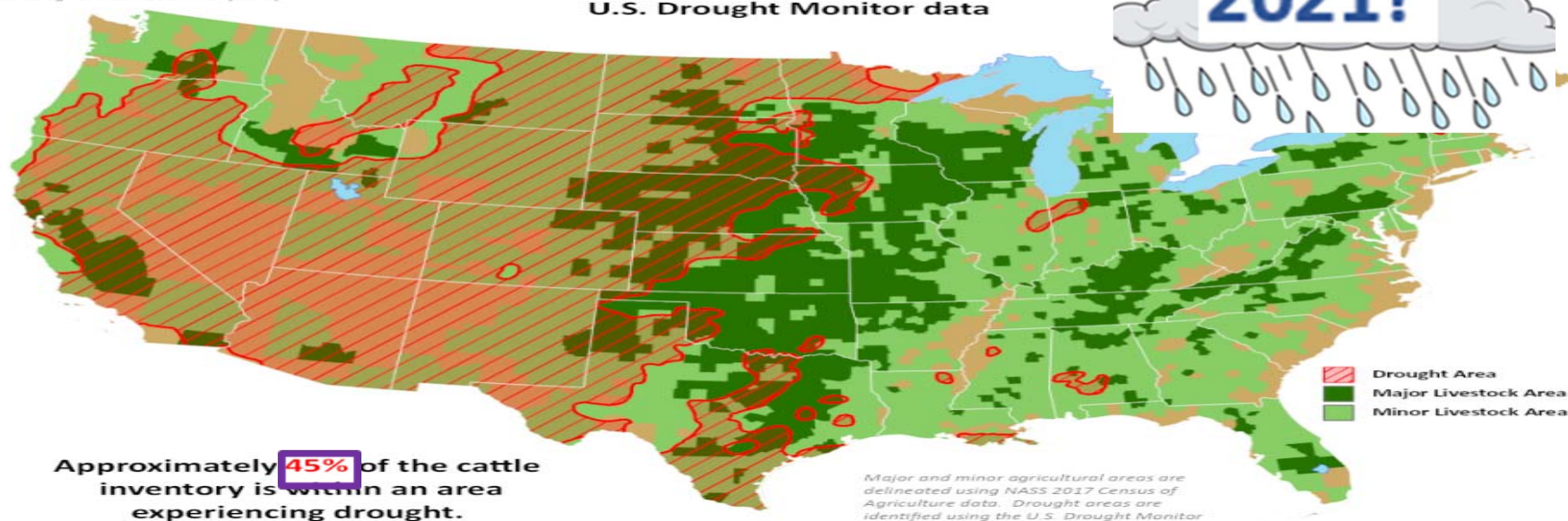


USDA United States Department of Agriculture

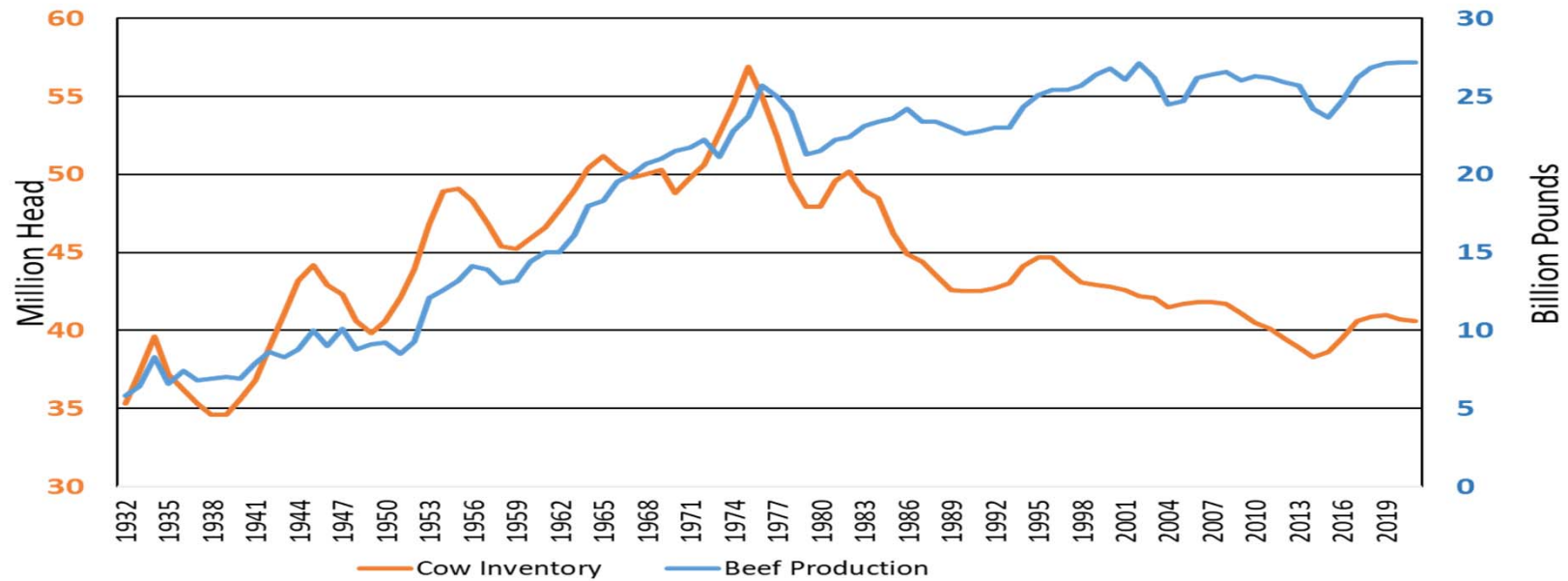
This product was prepared by the USDA, Office of the Chief Economist (OCE) World Agricultural Outlook Board (WAOB)

Cattle Areas in Drought

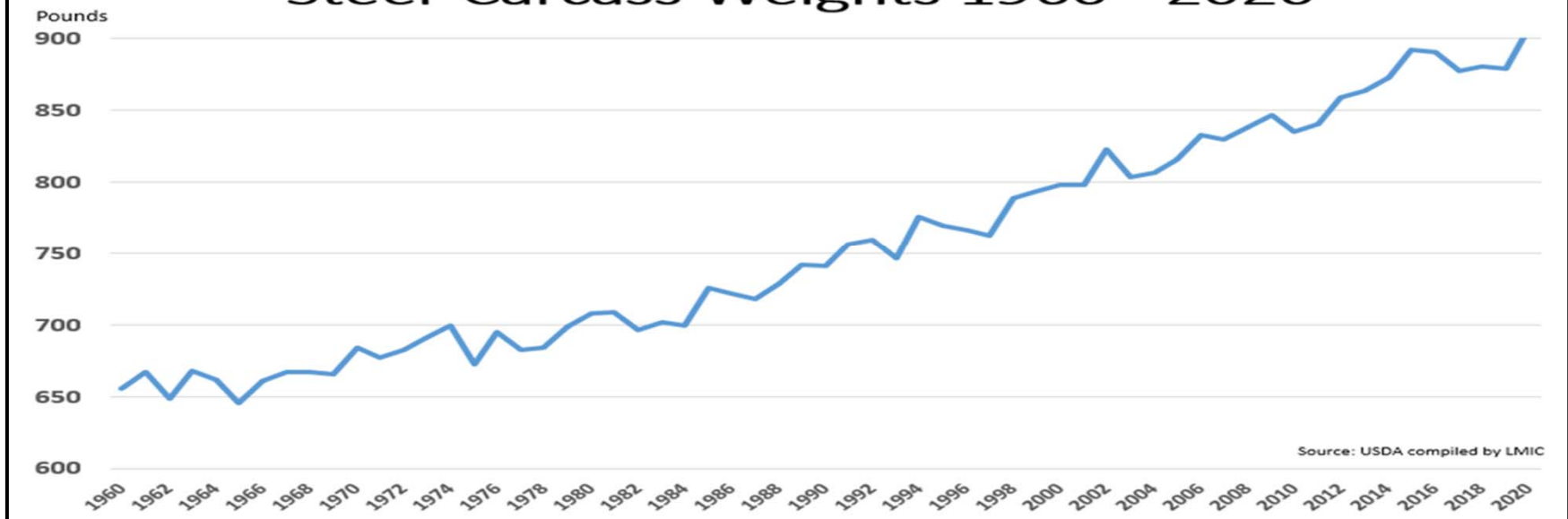
Reflects March 2, 2021
U.S. Drought Monitor data



Cow Inventory and Beef Production

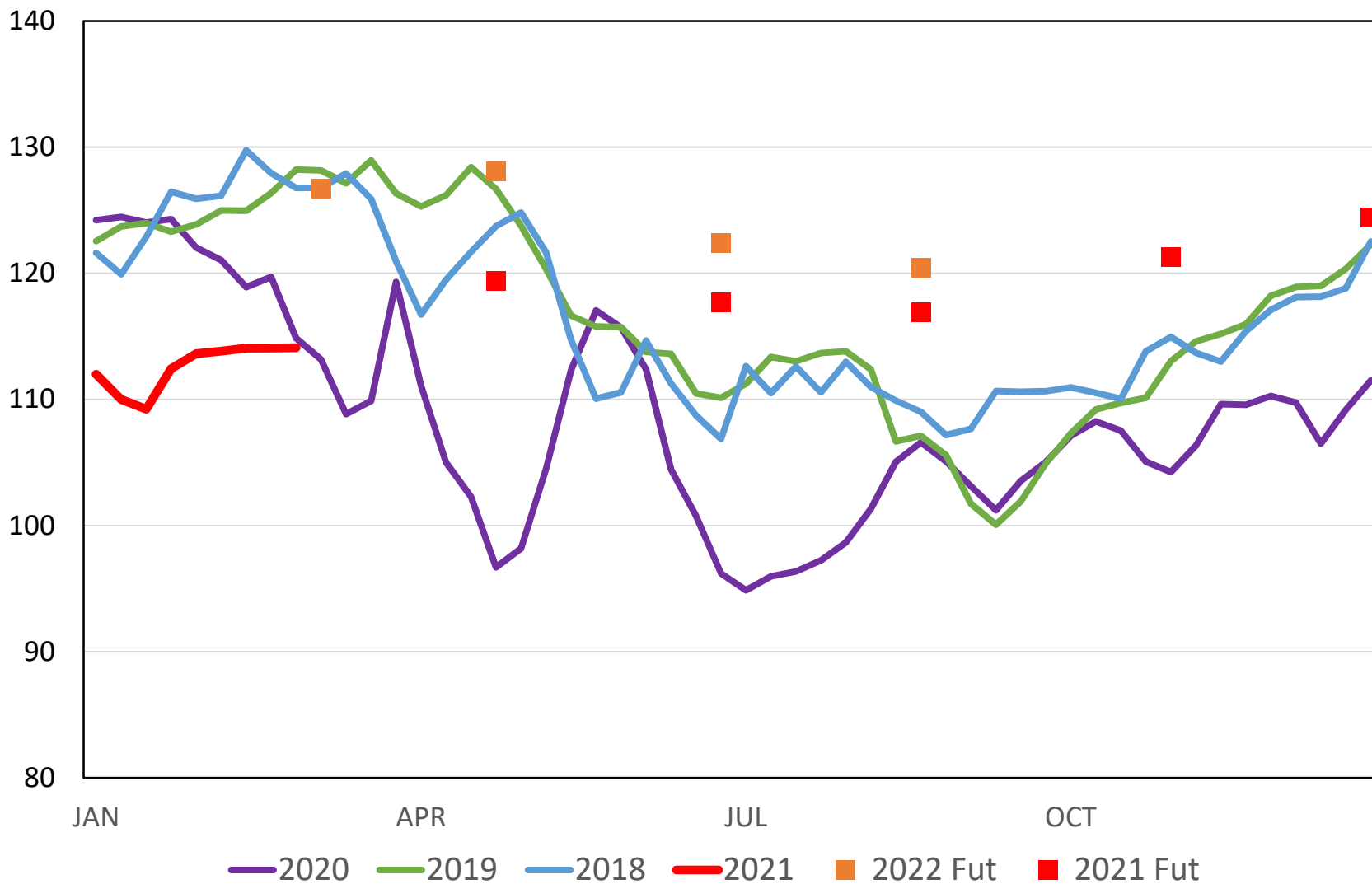


Steer Carcass Weights 1960 - 2020

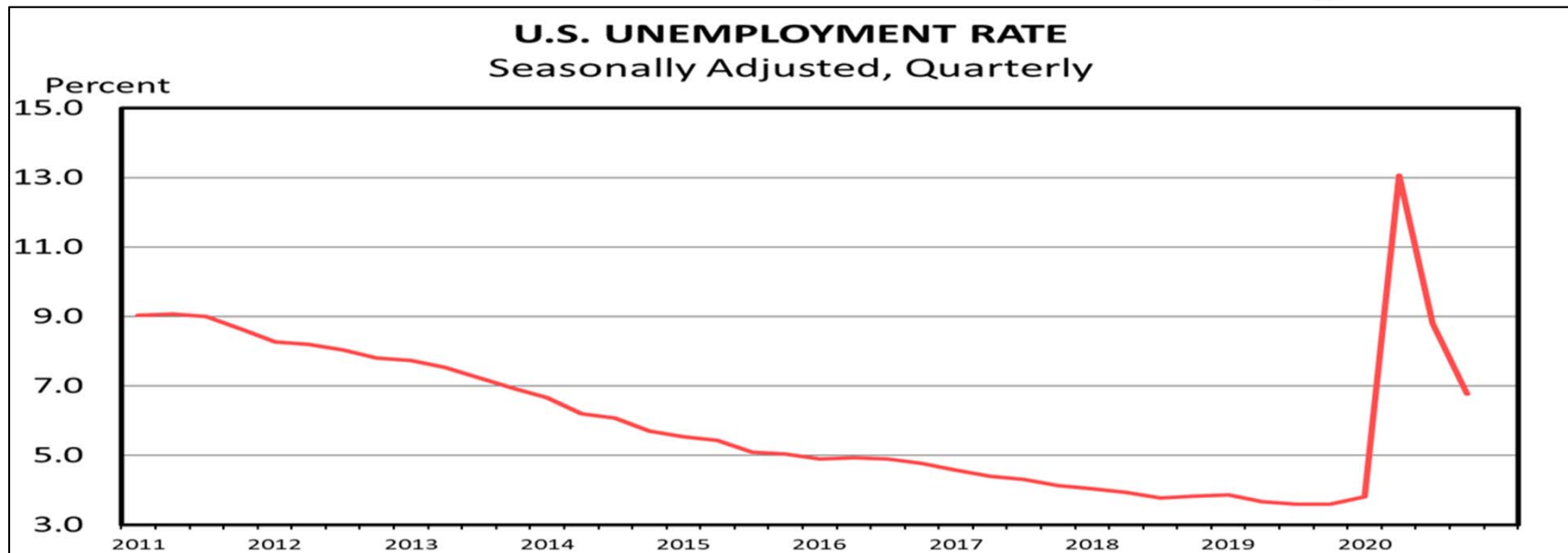


SLAUGHTER STEER PRICES

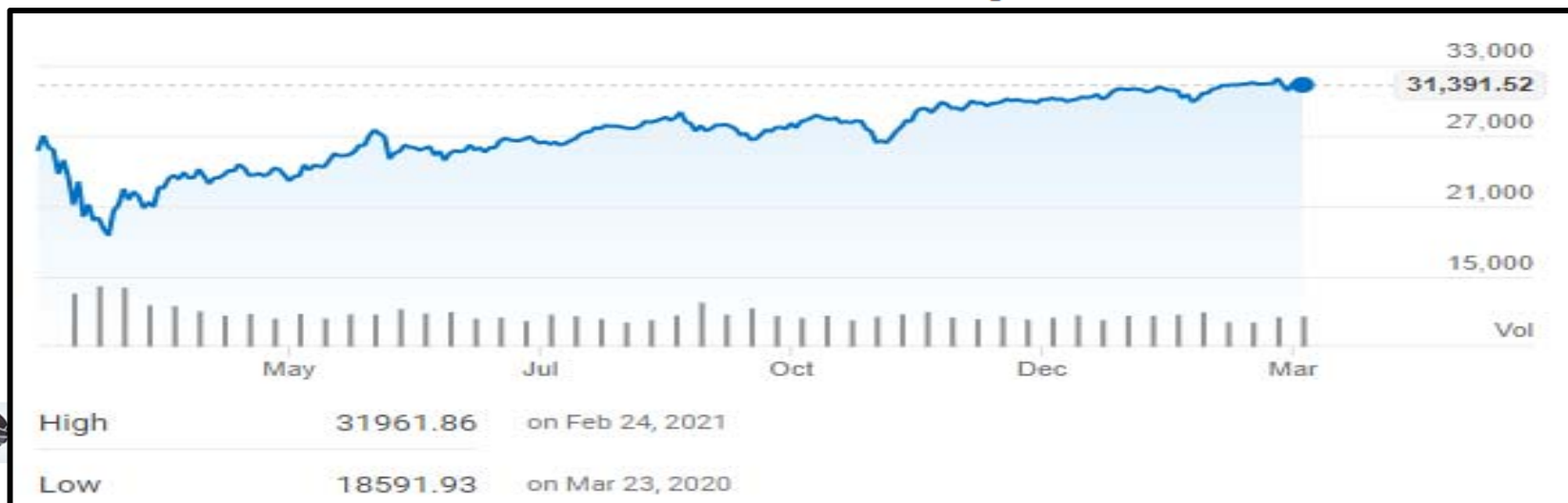
5 Market Weighted Average, Weekly



US ECONOMY?

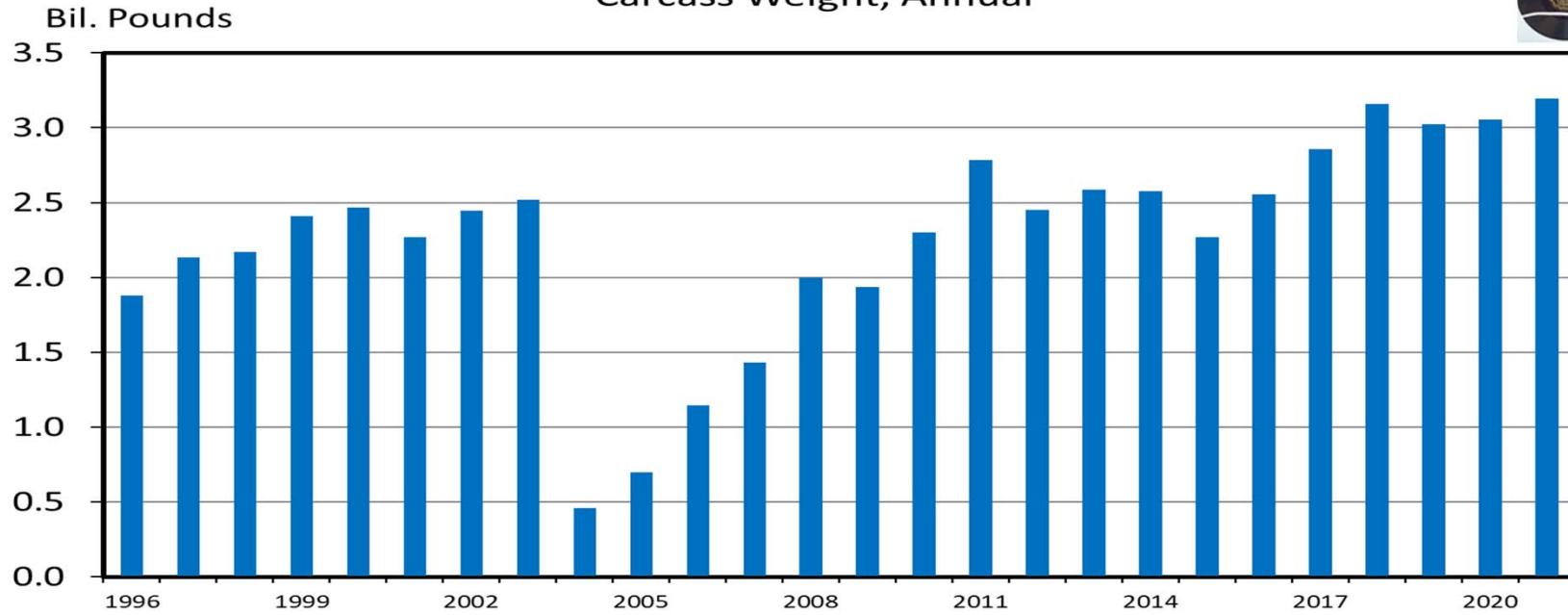


Dow Jones Industrial Average



U.S. BEEF AND VEAL EXPORTS

Carcass Weight, Annual

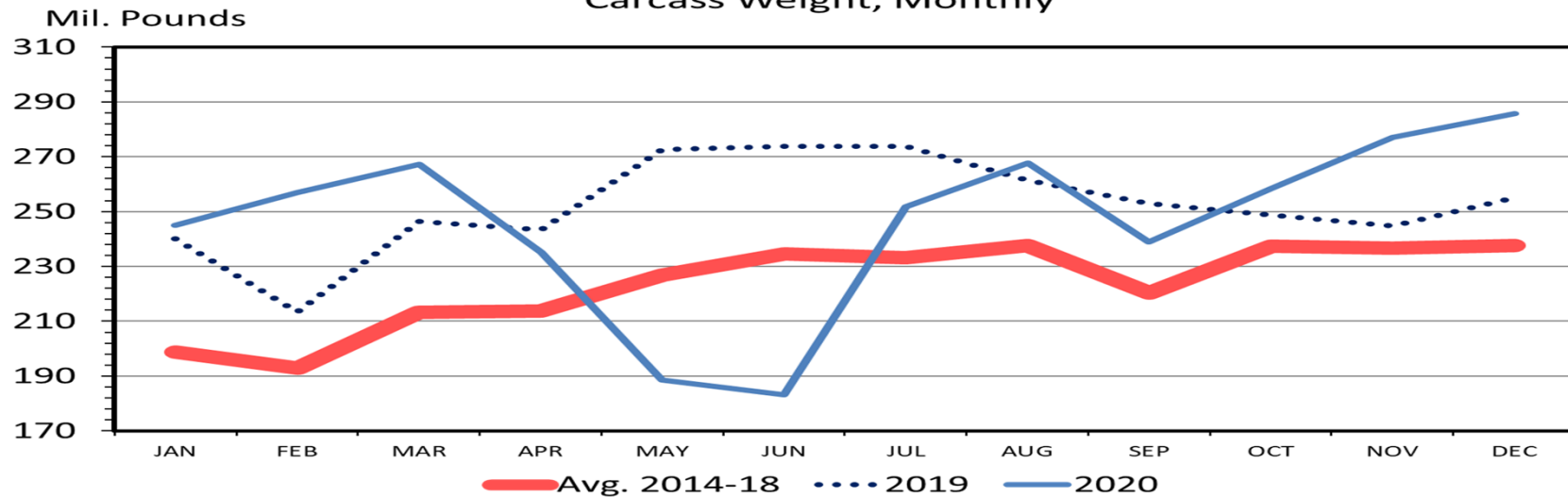


Data Source: USDA-ERS & USDA-FAS

Livestock Marketing Information Center

US BEEF AND VEAL EXPORTS

Carcass Weight, Monthly



U.S. Ranking in World



Major U.S. Meat Export Customers

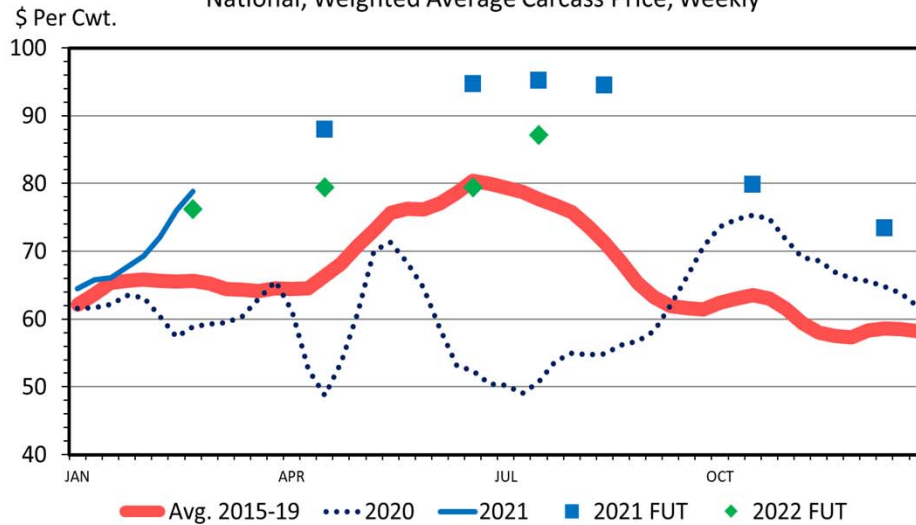
BEEF	PORK	CHICKEN
Japan	Mexico	Mexico
Korea	Japan	Canada
Mexico	Canada	Cuba
Canada	China	Hong Kong
Hong Kong	Korea	Taiwan
China?	Australia	China 



Other Livestock

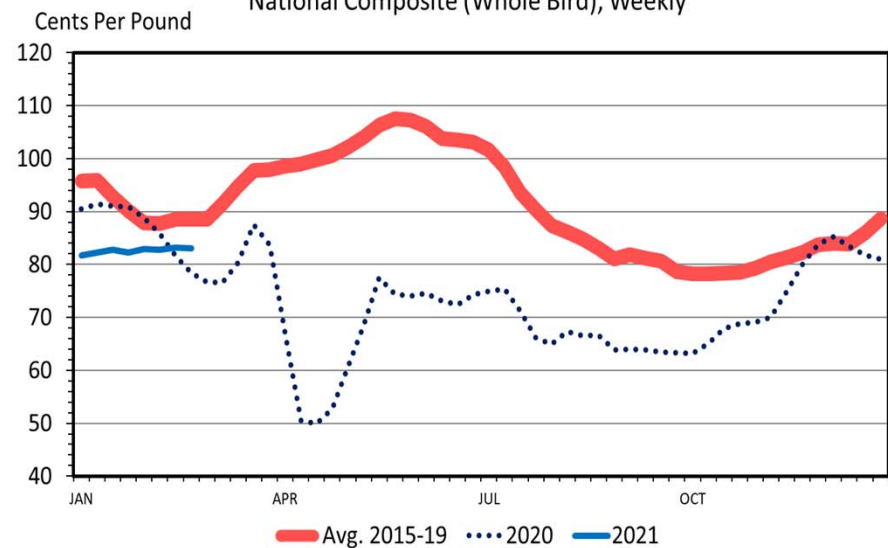
BASE SLAUGHTER HOG PRICES

National, Weighted Average Carcass Price, Weekly



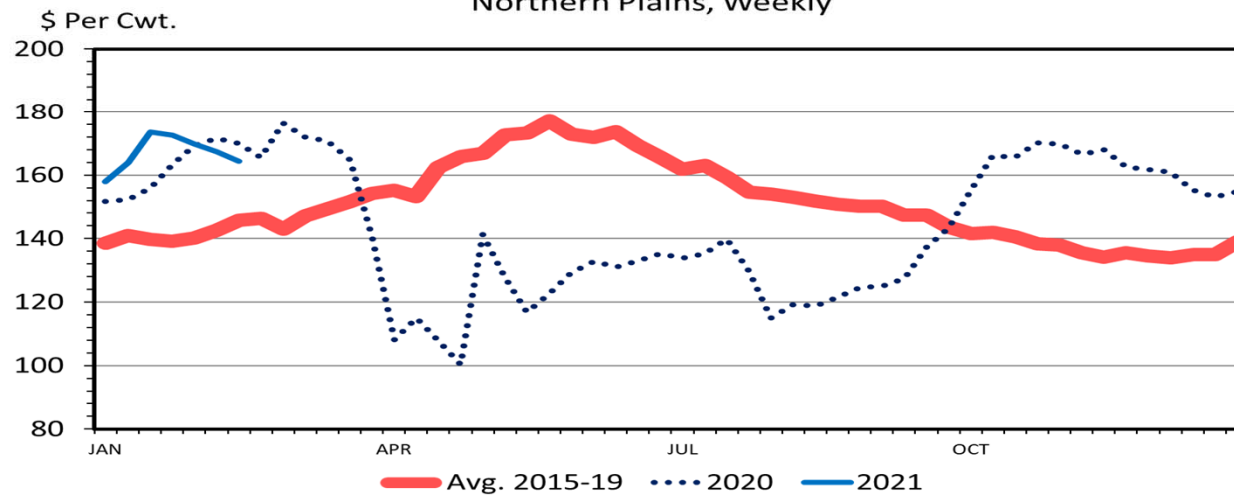
BROILER PRICES

National Composite (Whole Bird), Weekly



SLAUGHTER LAMB PRICES

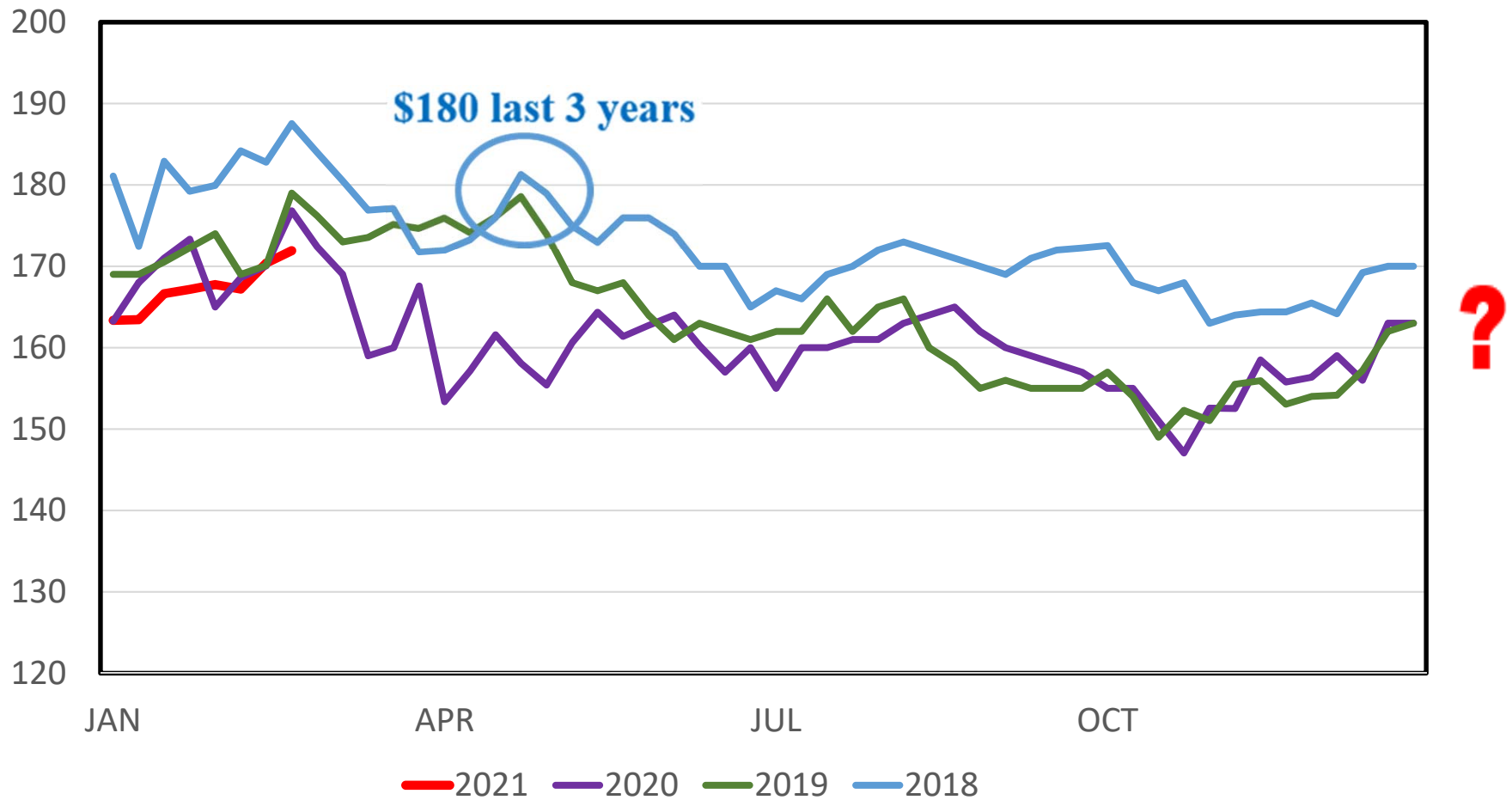
Northern Plains, Weekly



Data Source: USDA-AMS; Livestock Marketing Information Center

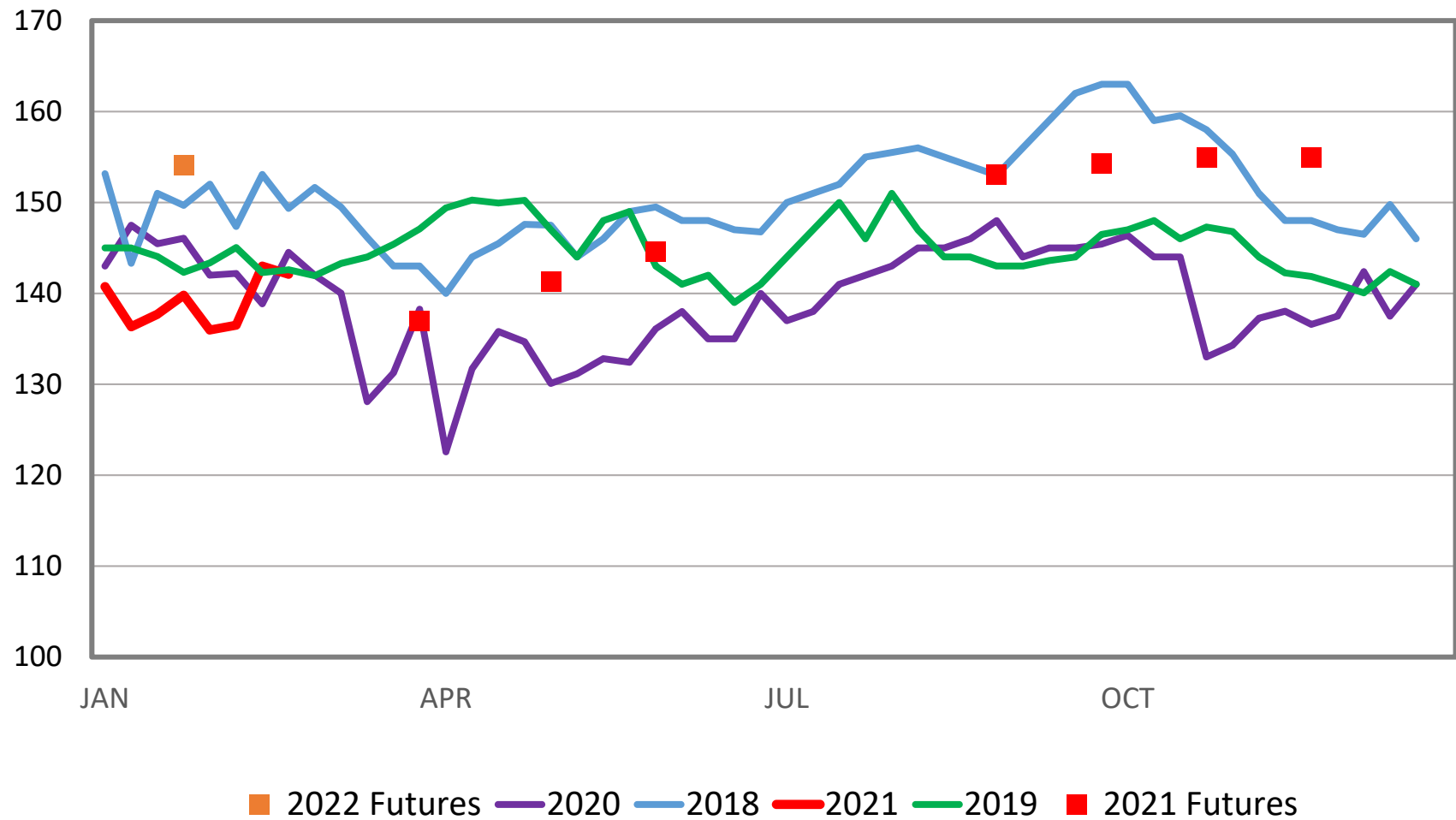
MED. FRAME #1 STEER CALF PRICES

550-600 Pounds, N.D., Weekly



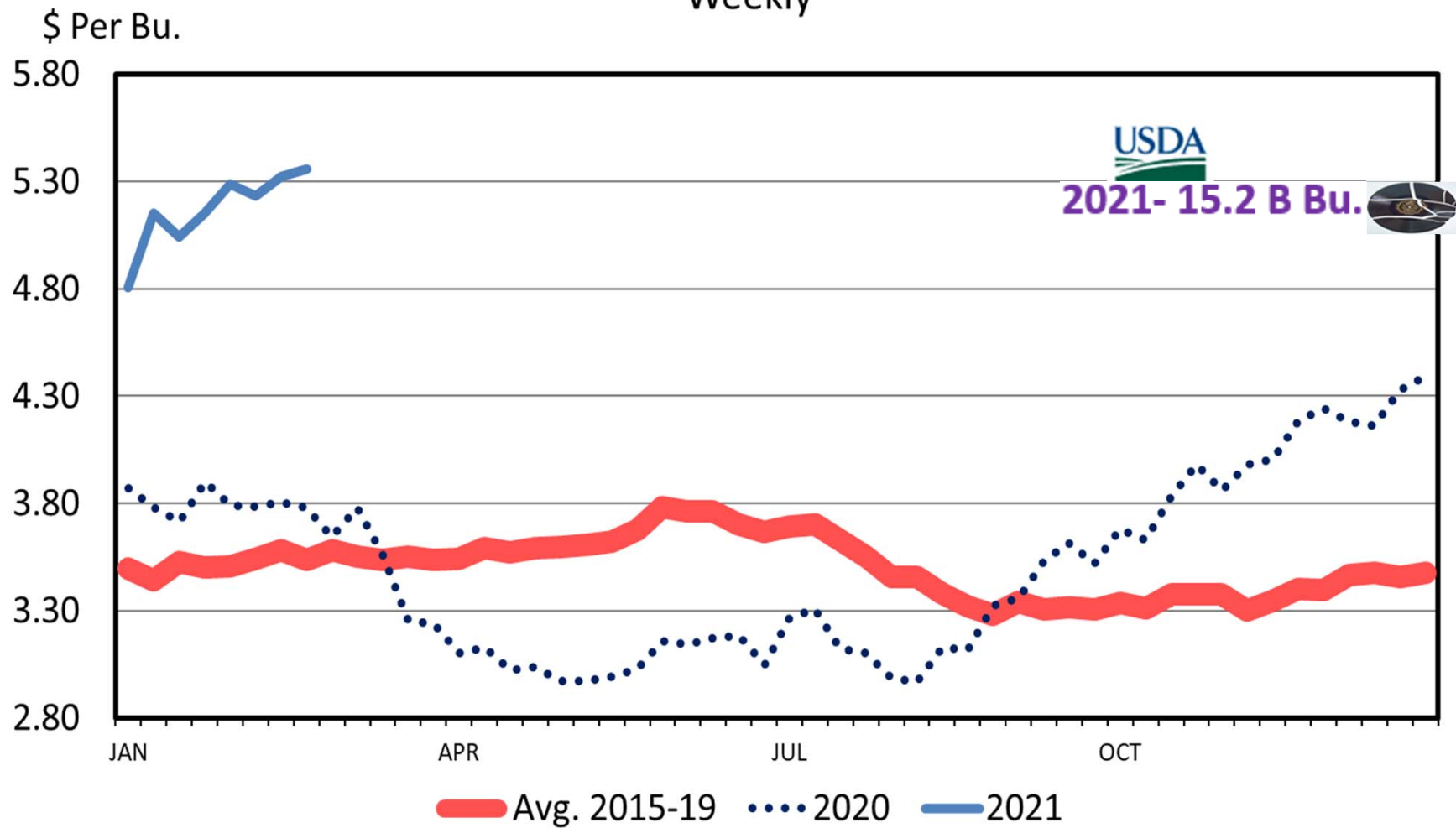
MED. & LRG. #1 FEEDER STEER PRICES

750-800 Pounds, N.D., Weekly



OMAHA CORN PRICES

Weekly



Data Source: USDA-AMS

Livestock Marketing Information Center

CALF PRICES FROM COVID-19 TO CORN PRICES

JAN FDR CAT and MAR CORN

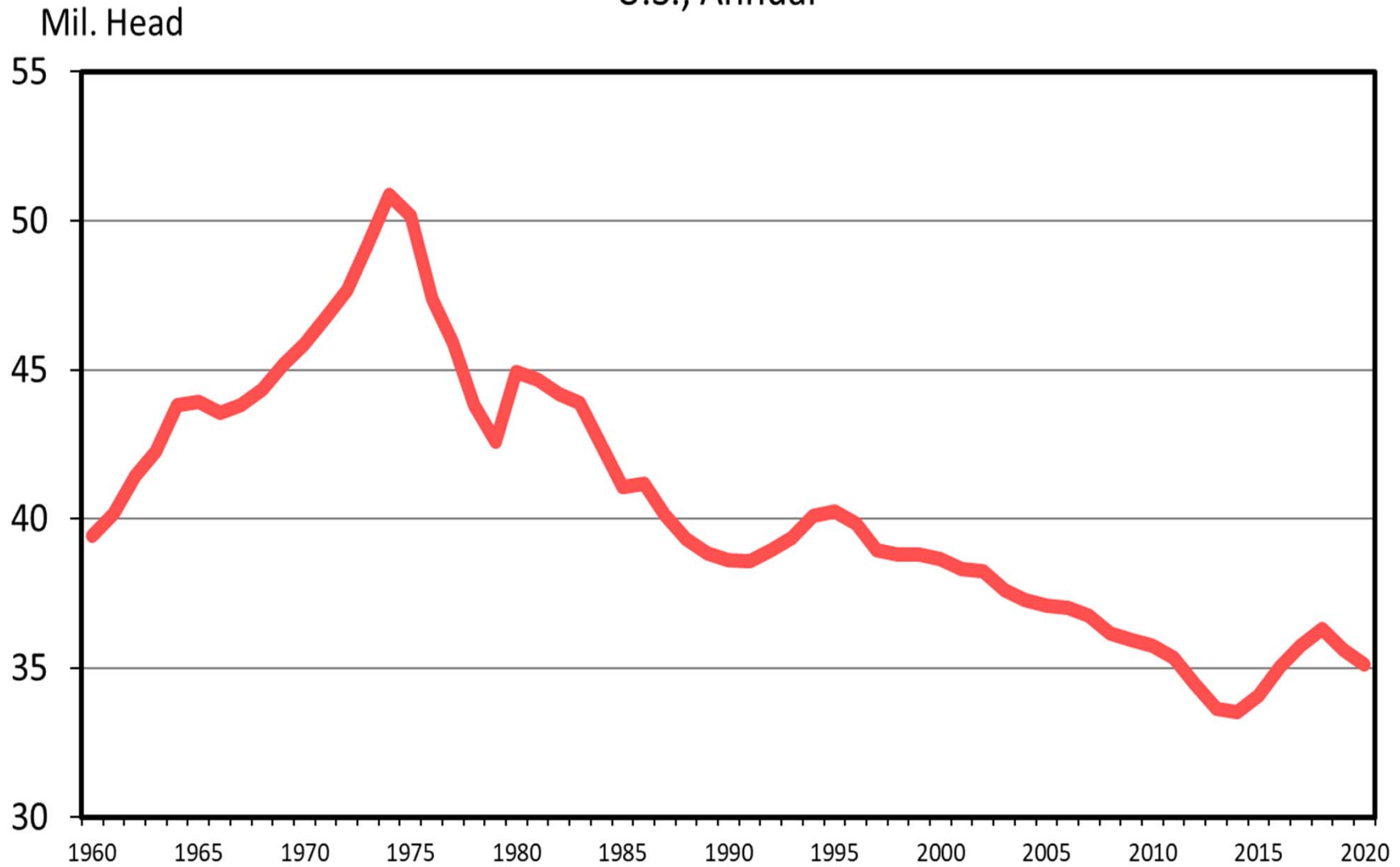


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CALF CROP

U.S., Annual



Data Source: USDA-NASS Livestock Marketing Information Center



North Dakota Weekly Cattle Auction Summary
AMS Livestock, Poultry, & Grain Market News
North Dakota Dept of Ag Mrkt News

Mon Mar 1, 2021

STEERS - Medium and Large 1 (Per Cwt / Actual Wt)

Head	Wt Range	Avg Wt	Price Range	Avg Price	
8	375-394	387	201.00-205.00	202.45	
76	412-441	429	172.50-202.50	191.90	
71	452-498	476	173.50-191.50	180.81	
431	506-548	528	173.00-190.00	181.52	
443	550-599	570	162.50-183.00	171.92	
1030	600-648	626	149.00-168.50	161.37	
1131	651-699	679	144.00-162.25	151.14	
91	661	661	164.50	164.50	Fancy
1172	701-748	727	134.00-151.50	146.71	
1030	750-796	768	130.00-147.00	142.02	
10	799	799	120.50	120.50	Fleshy
1034	801-849	826	126.75-142.75	136.49	
381	850-883	865	125.00-137.00	134.94	
387	900-928	916	123.00-135.00	131.26	
19	936	936	114.50	114.50	Fleshy
186	955-991	970	124.00-127.25	125.54	

HEIFERS - Medium and Large 1 (Per Cwt / Actual Wt)

Head	Wt Range	Avg Wt	Price Range	Avg Price	
28	354-396	380	158.00-169.00	164.12	
41	406-434	417	164.00-168.00	165.96	
164	450-495	472	151.00-172.00	160.29	
366	510-547	526	145.00-165.50	159.53	
480	553-598	574	139.00-174.00	151.35	
782	602-649	626	129.50-153.00	142.62	
46	608	608	164.00	164.00	Replacement
661	652-694	667	125.50-149.00	136.66	
44	654-671	661	133.50-146.50	141.40	Replacement
808	702-749	729	123.00-139.00	129.38	
37	708-722	717	133.00-140.00	137.38	Replacement
352	751-789	773	122.00-129.25	127.23	
211	759-778	772	125.00-138.00	128.76	Replacement
284	800-823	816	115.00-125.25	123.67	
11	810	810	123.50	123.50	Replacement
12	917	917	117.50	117.50	



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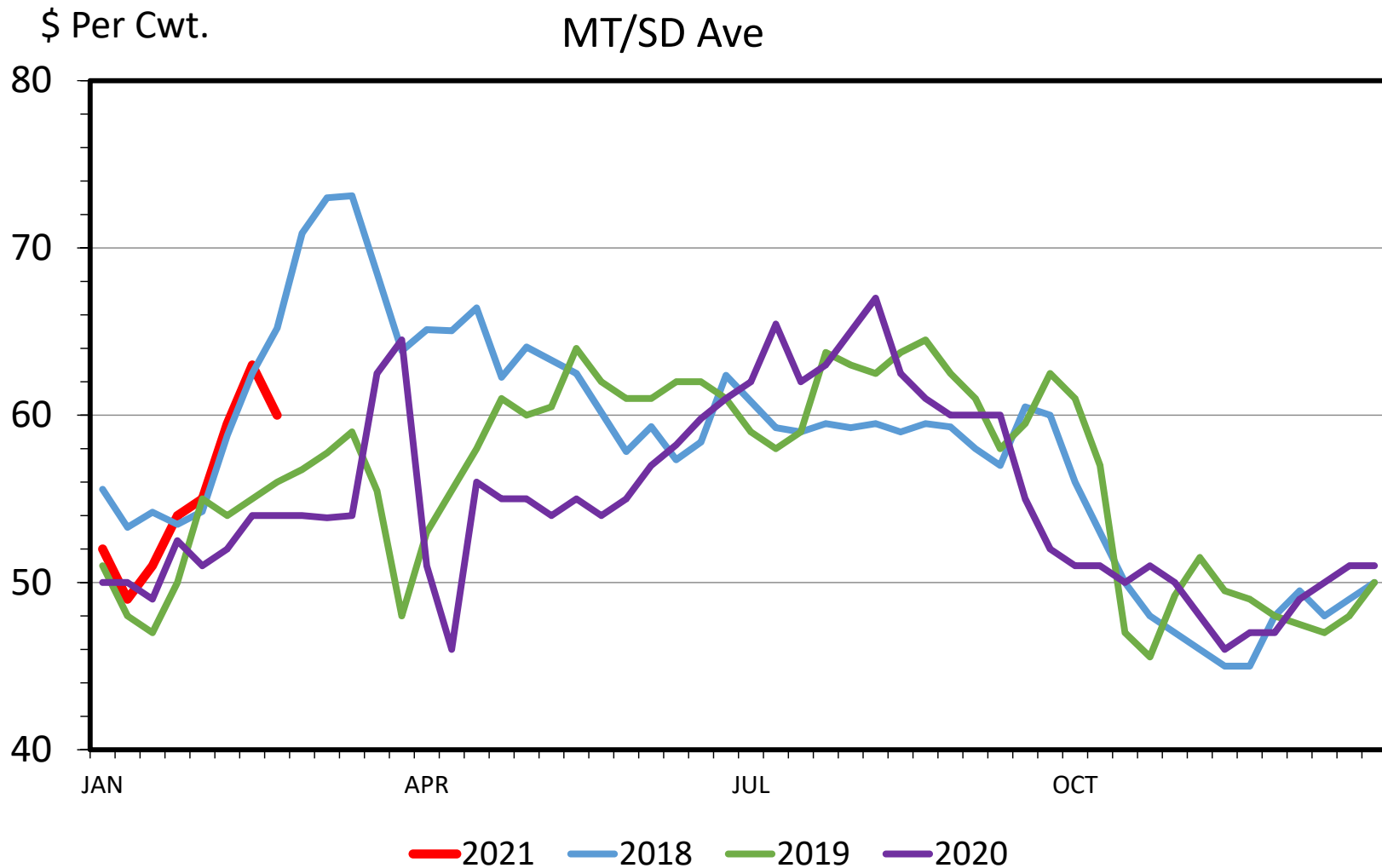
Adding Value To Calves

- Weaned
 - Verified vaccination program
 - Source/age verified/no implants
 - Natural (no antibiotics or implants)
 - Beef Quality Assurance (BQA) –packers requiring
 - Replacement quality heifers
- * *The more information you provide the better*
- * *Check with your market before selling*

BEEF CULL COW PRICES

Average 85-90% Lean, Weekly

MT/SD Ave



USDA-AMS, Compiled & Analysis by

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HINDSIGHT IS 2020 BUT 2021?



African Swine Fever

Record Meat
Production




TYSON FIRE

Exports



Trade Agreements



Drought/Blizzards/Floods

 **Corn Prices**

Consumer Demand

COMPETING MEATS

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Price Risk Management Tools

- Cash forward contract
- Video and internet auctions
- CME futures
- CME options
- Livestock Risk Protection (LRP)
- Which one or combination fits your marketing plan?
- **“If you don’t manage risk, risk will manage you”**

2021: COVID, Weather, Corn, and Economy?
Causing Volatility and Risk , especially on
seasonal basis. Flexible marketing plans
should include risk management tools

