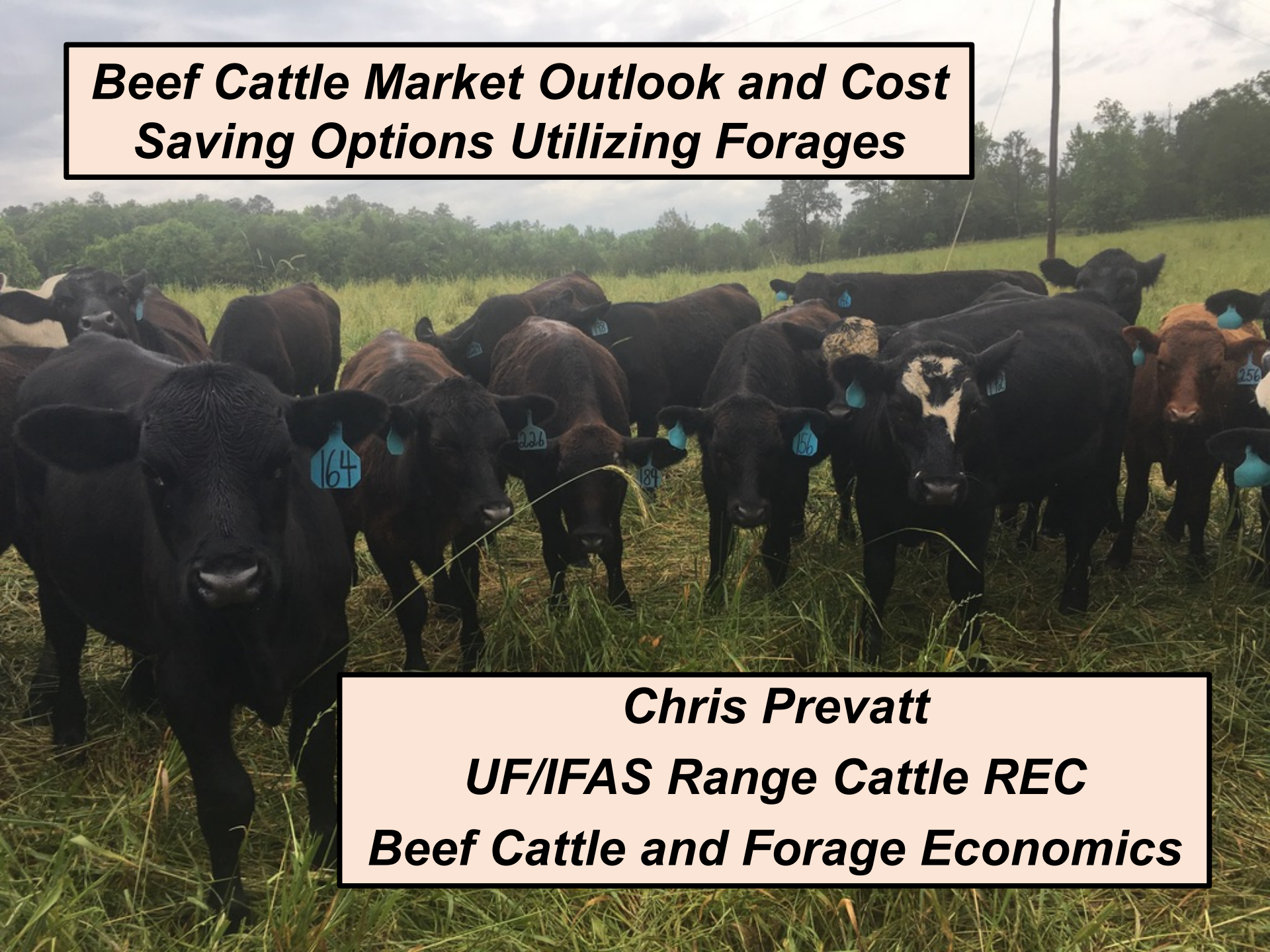
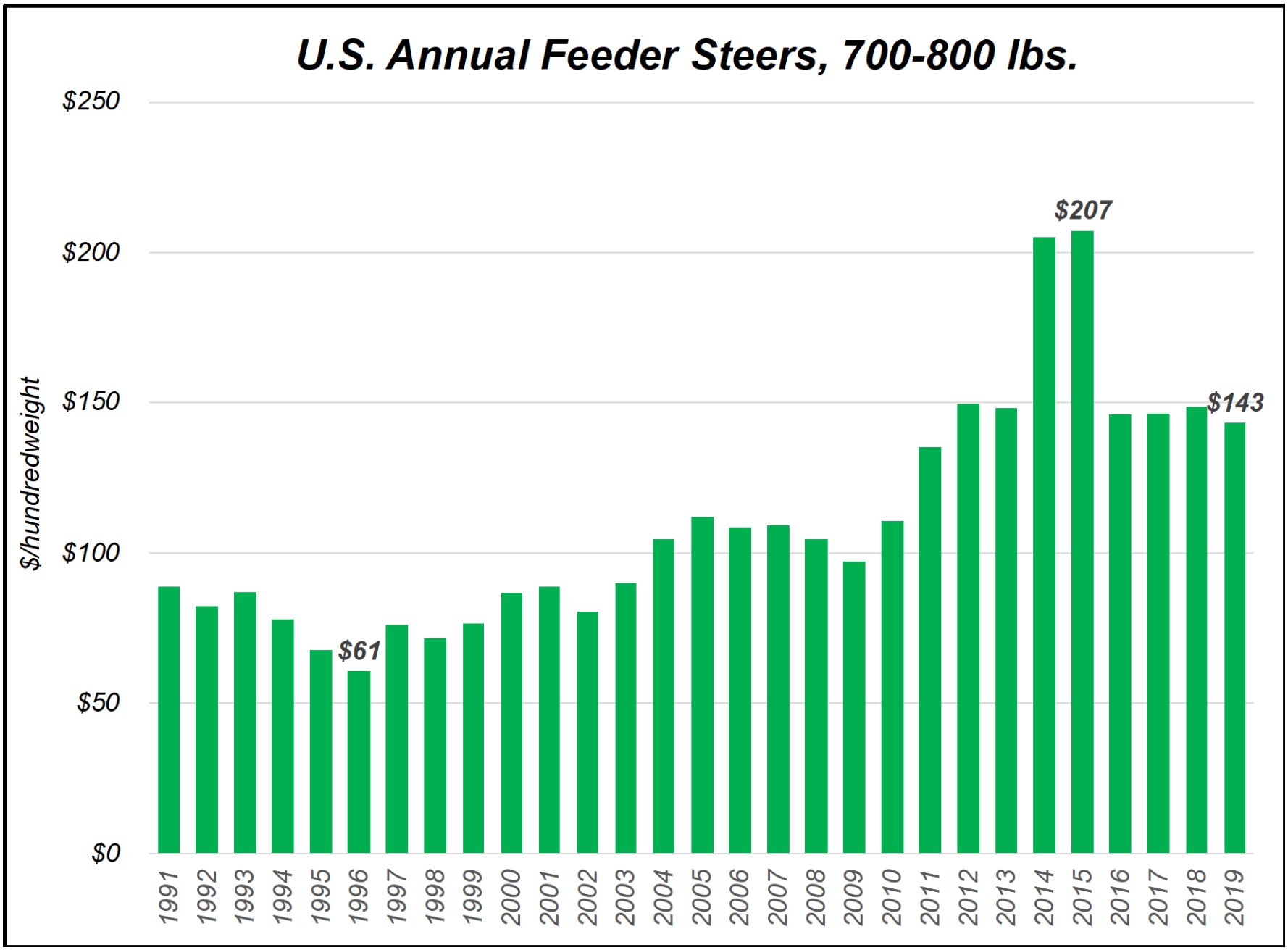
Beef Cattle Market Outlook and Cost Saving Options Utilizing Forages



Chris Prevatt

UF/IFAS Range Cattle REC

Beef Cattle and Forage Economics


U.S. Annual Feeder Steers, 700-800 lbs.
$250
$200
$150
$100
$50
$0
$/hundredweight
$61
$207
$143
1991
1992
1993
1994
1995
1996
1997
1998
1999
2000
2001
2002
2003
2004
2005
2006
2007
2008
2009
2010
2011
2012
2013
2014
2015
2016
2017
2018
2019

What Works on the Farm?

- *Show me what you can do…*

- *No Experiments*
- *No Changes*
- *Just Evaluating Where We're At*

The Market Makes the Rules

- ***What do we have the work with?***
- ***This is what we have… let's allocate it out***

Revenue

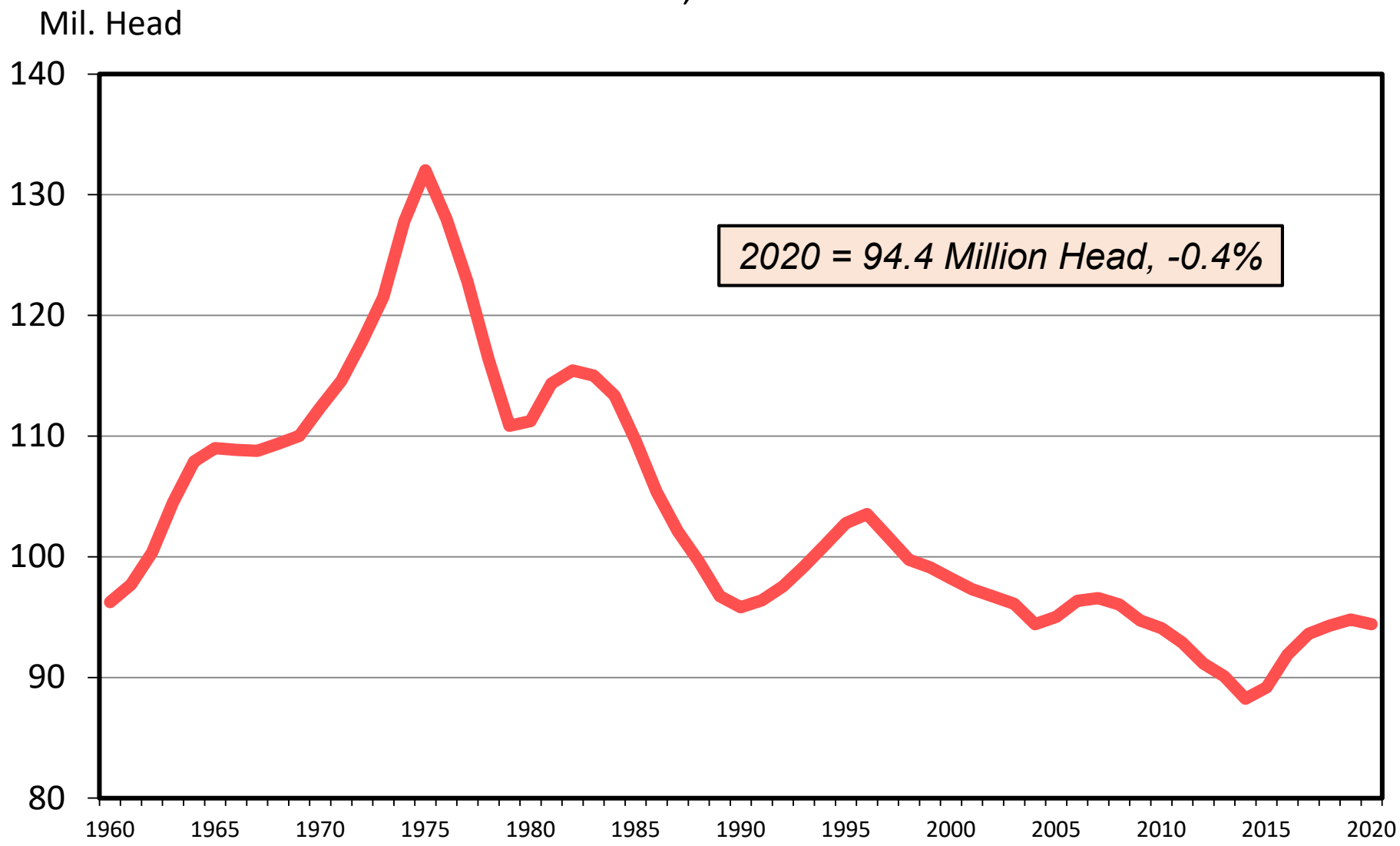
- Fixed Costs

- Variable Costs

Net Returns

JANUARY 1 TOTAL CATTLE INVENTORY

U.S., Annual



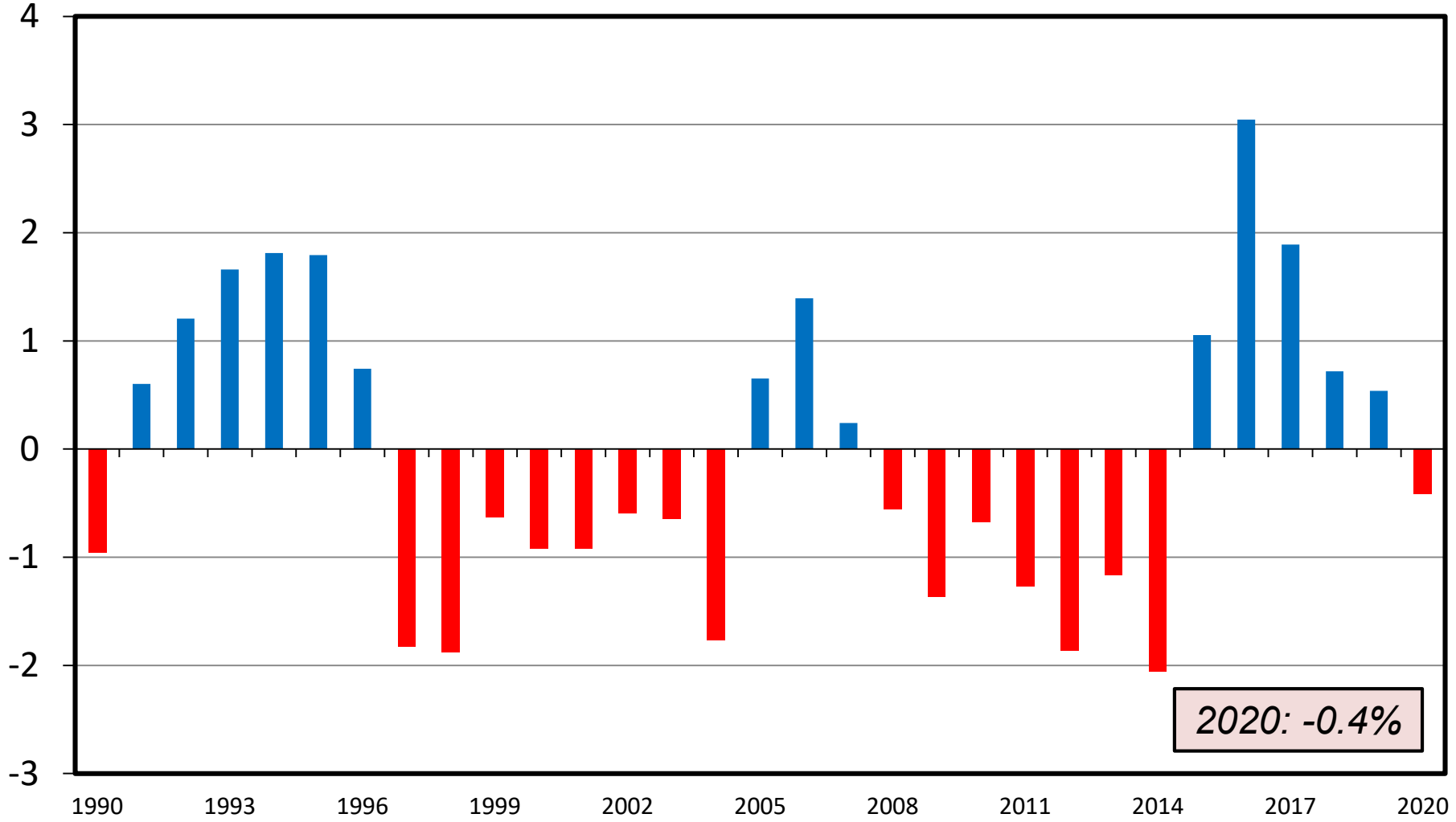
Data Source: USDA-NASS

Livestock Marketing Information Center

C-N-01
01/31/20

PERCENT CHANGE IN CATTLE INVENTORY

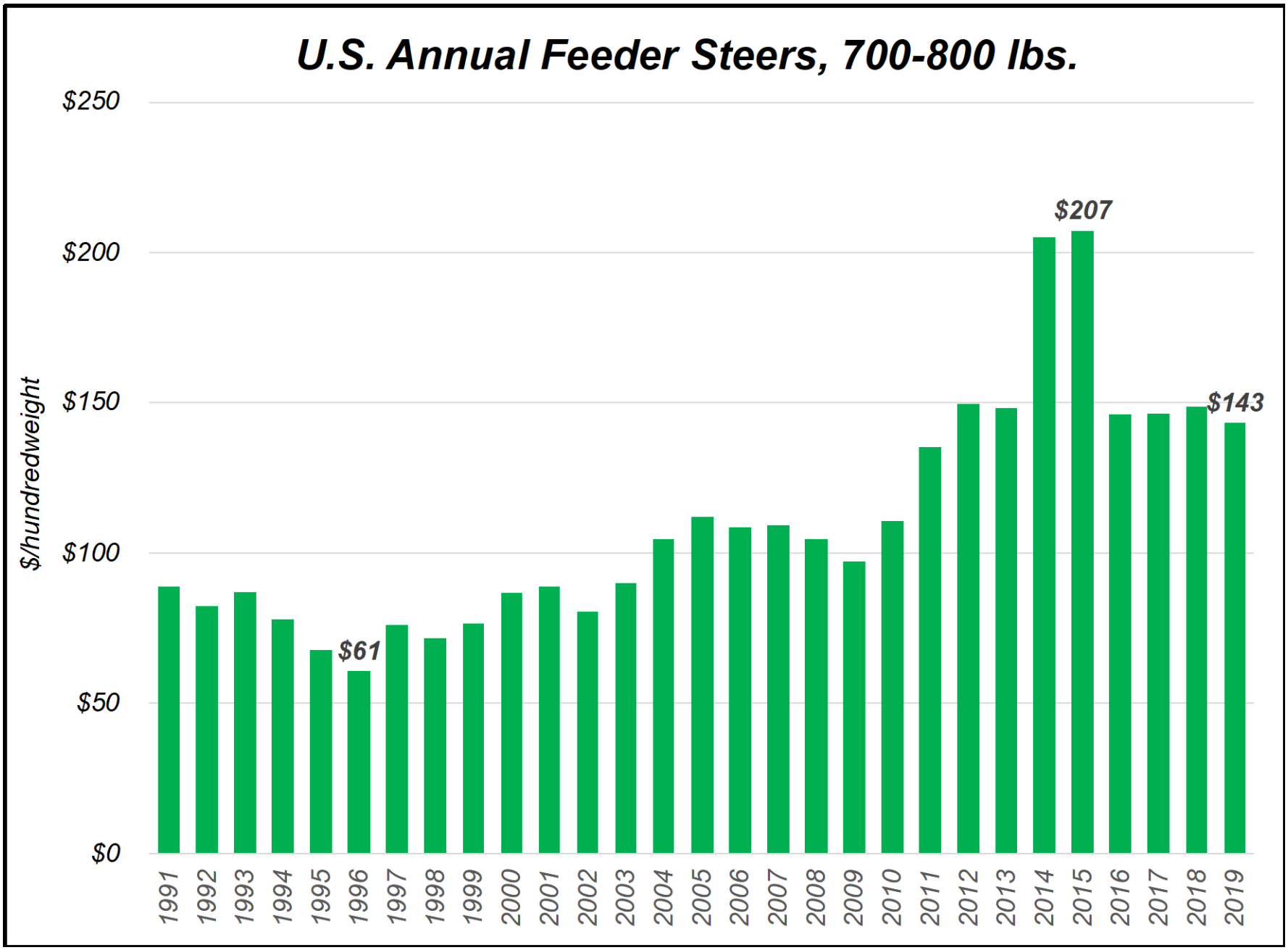
U.S., January 1



Data Source: USDA-NASS, Analysis by LMIC

Livestock Marketing Information Center

C-N-48
01/31/20


U.S. Annual Feeder Steers, 700-800 lbs.
$250
$200
$150
$100
$50
$0
$/hundredweight
$61
$207
$143
1991
1992
1993
1994
1995
1996
1997
1998
1999
2000
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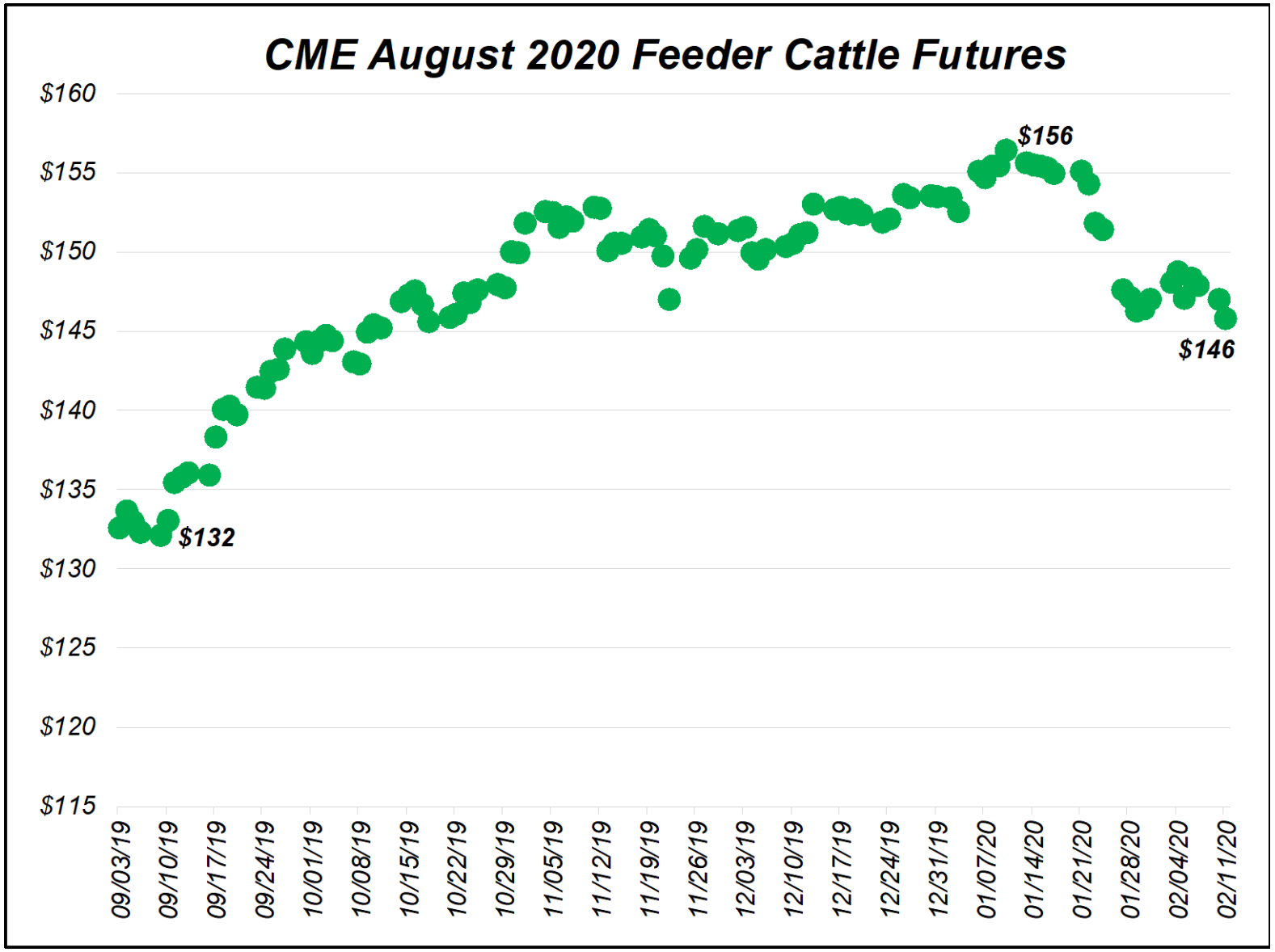
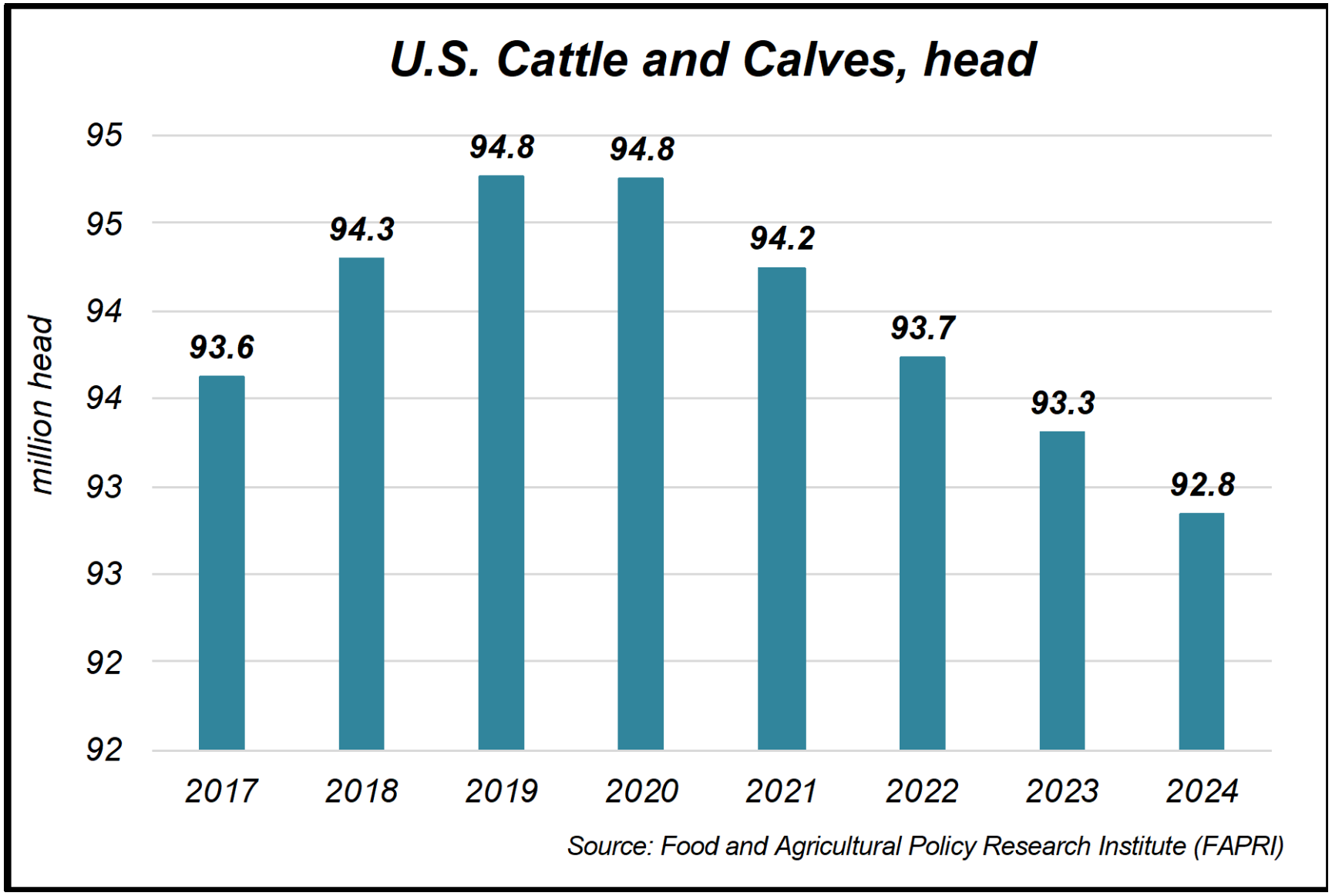
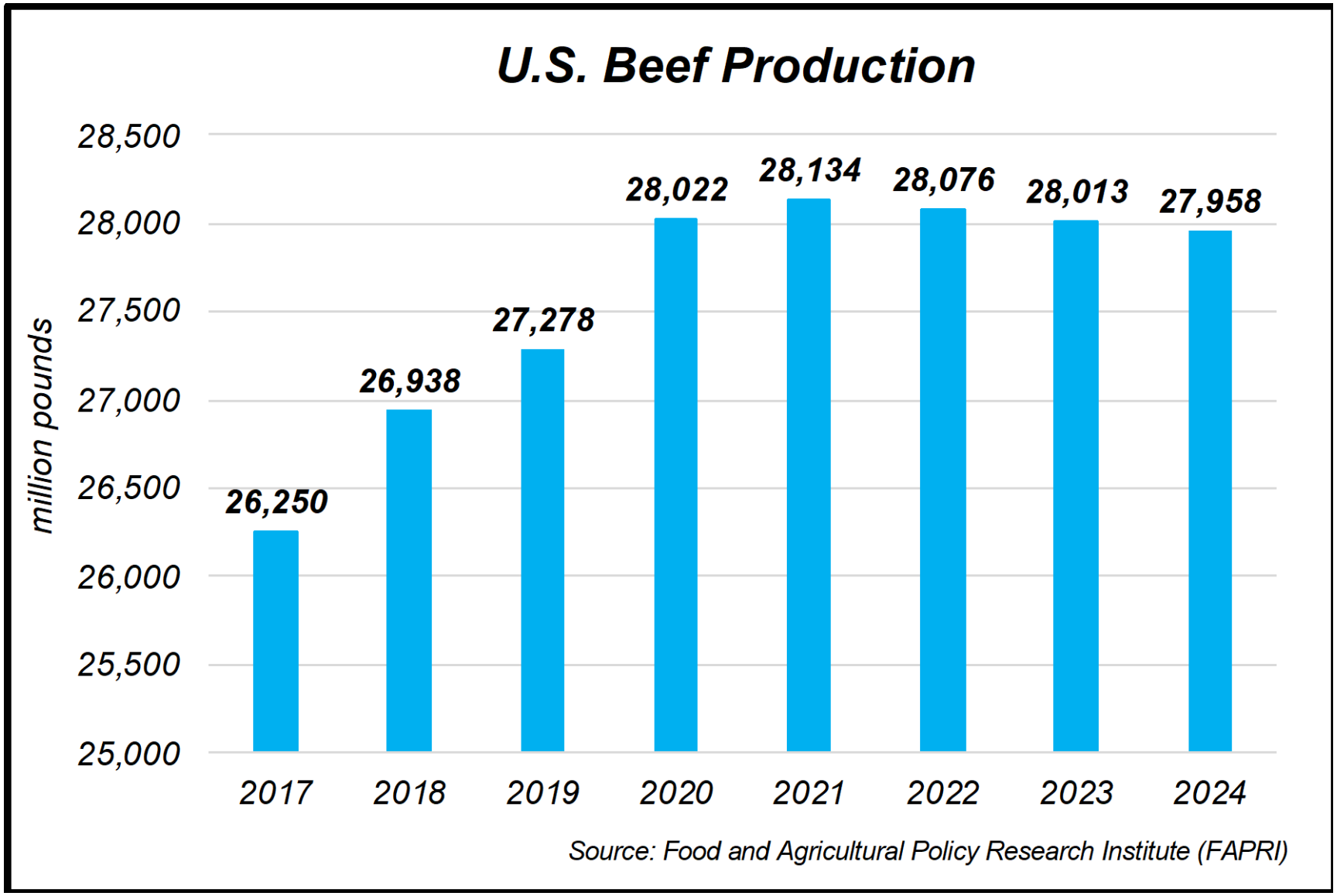
2014
2015
2016
2017
2018
2019

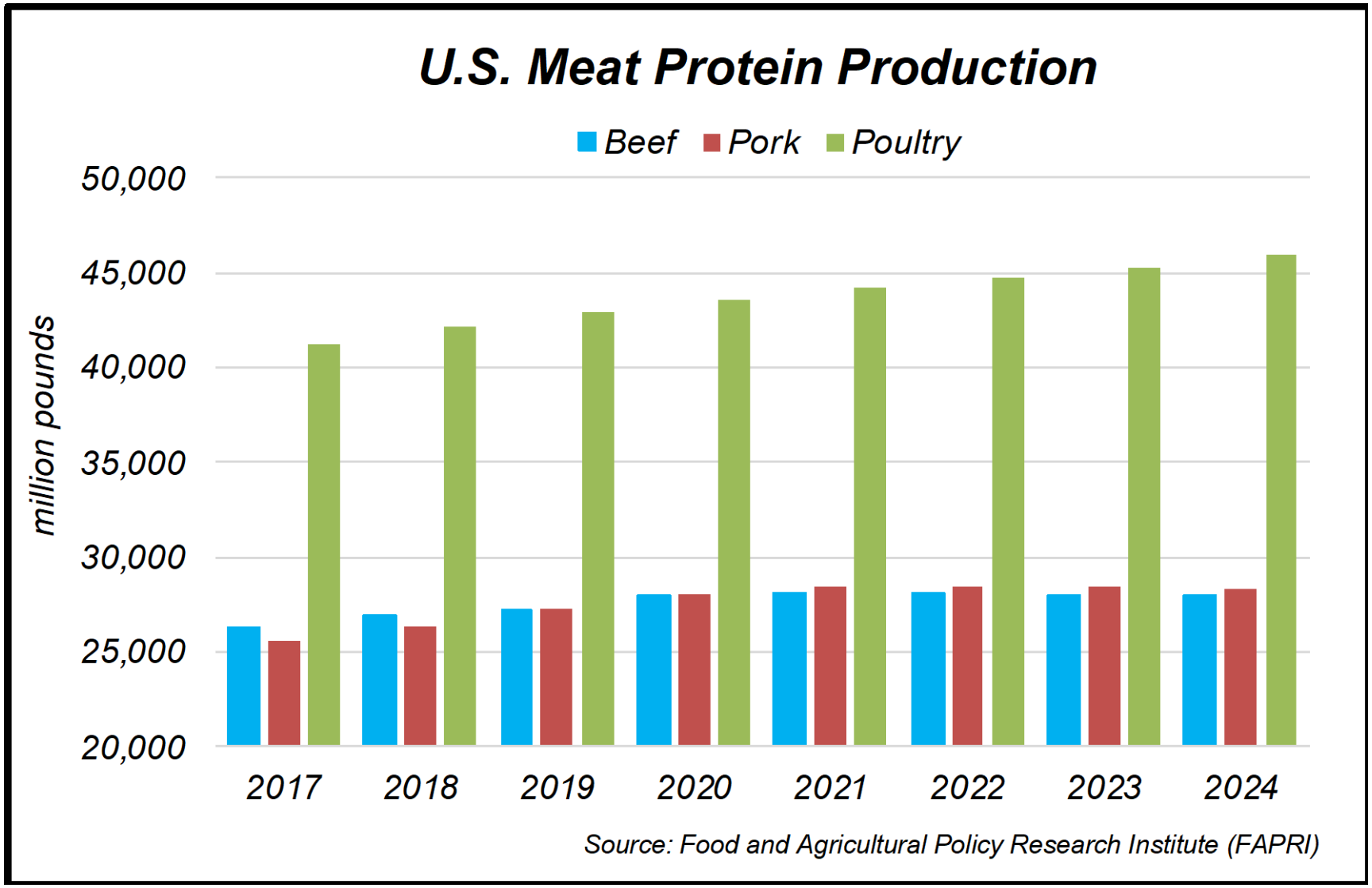

CME August 2020 Feeder Cattle Futures
$160
$155
$150
$145
$140
$135
$130
$125
$120
$115
$156
$132
$146
09/03/19
09/10/19
09/17/19
09/24/19
10/01/19
10/08/19
10/15/19
10/22/19
10/29/19
11/05/19
11/12/19
11/19/19
11/26/19
12/03/19
12/10/19
12/17/19
12/24/19
12/31/19
01/07/20
01/14/20
01/21/20
01/28/20
02/04/20
02/11/20



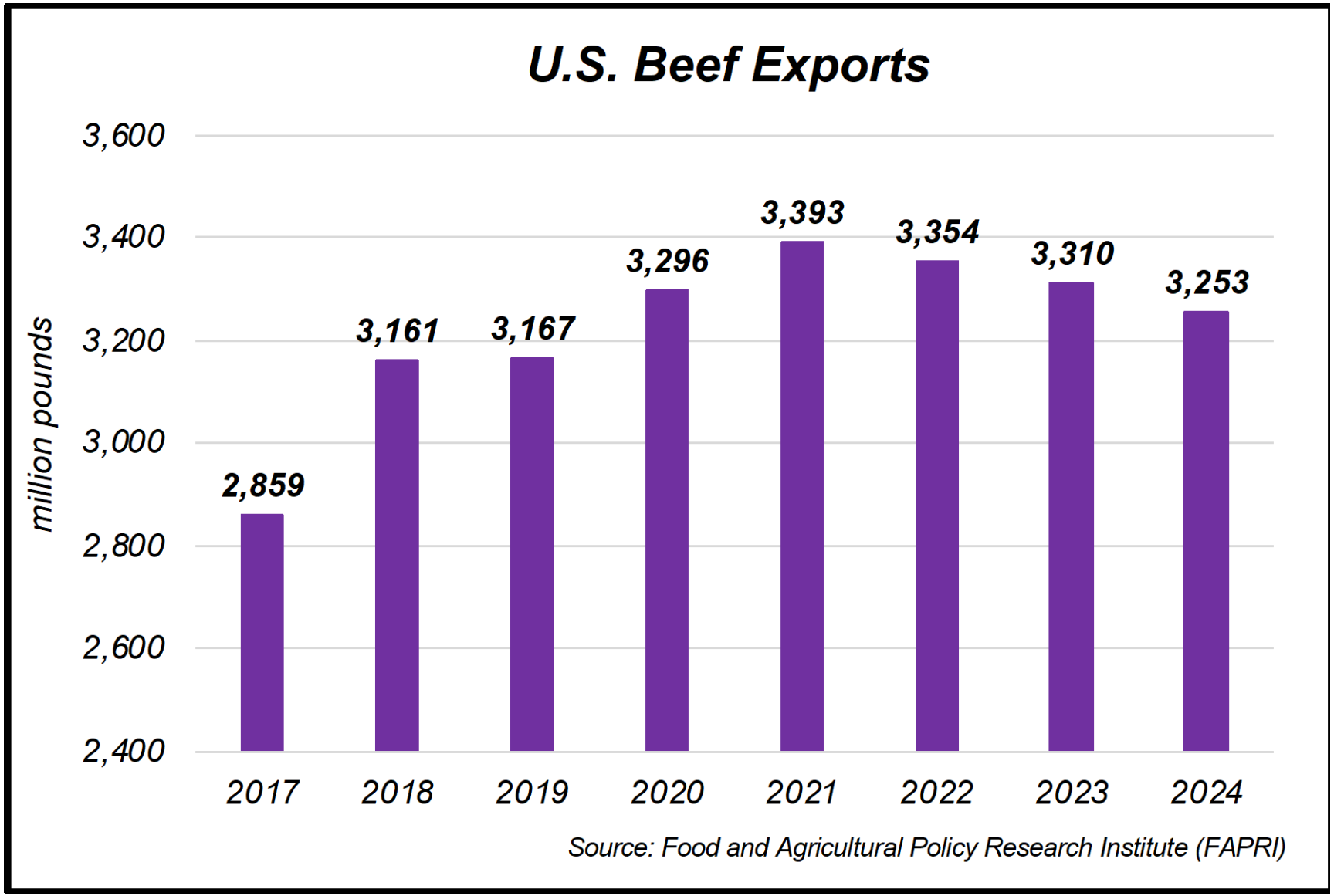
Supply fundamentals are supportive of prices going forward.

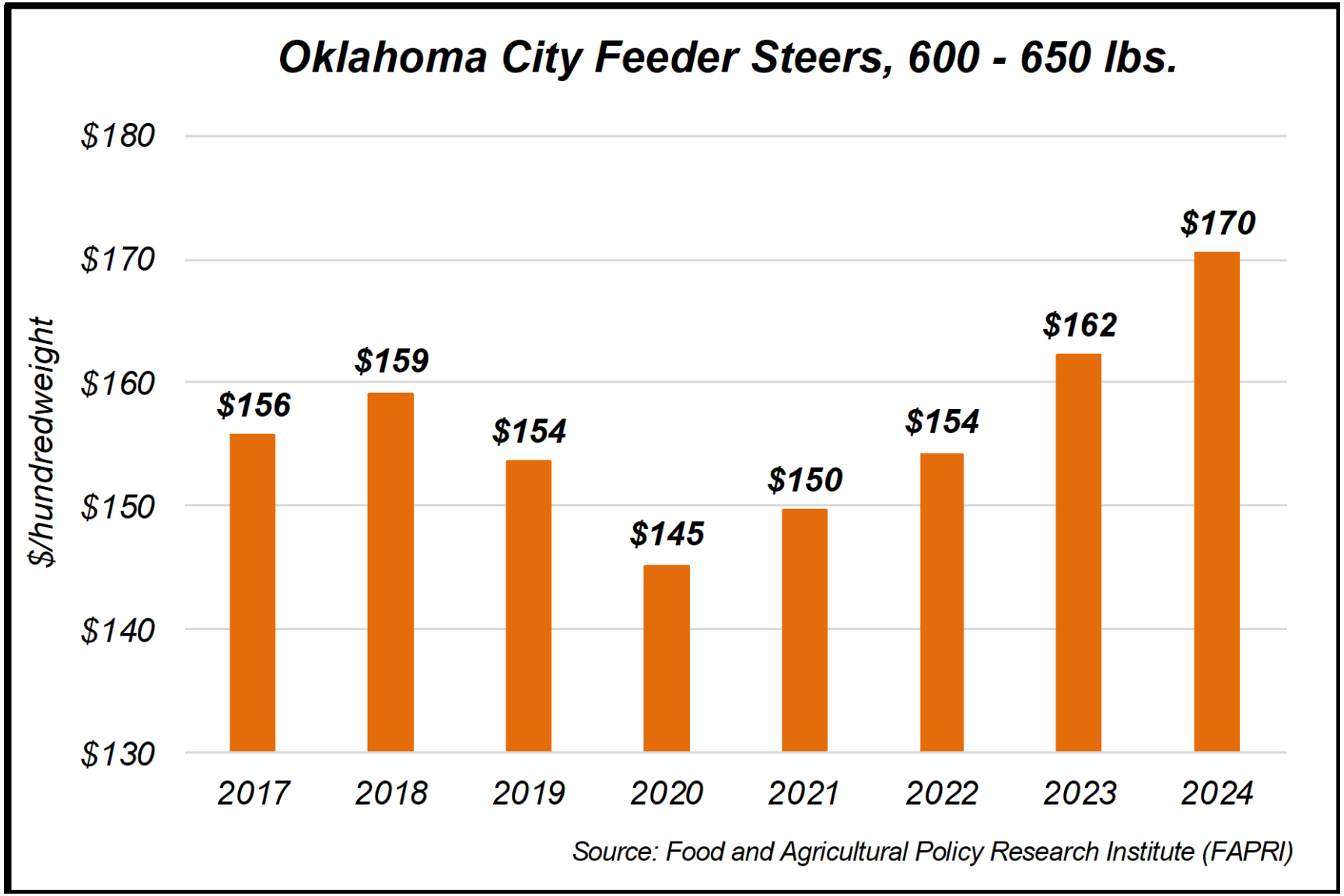

U.S. Beef Production
million pounds
28,500
28,000
27,500
27,000
26,500
26,000
25,500
25,000
26,250
26,938
27,278
28,022
28,134
28,076
28,013
27,958
2017
2018
2019
2020
2021
2022
2023
2024
Source: Food and Agricultural Policy Research Institute (FAPRI)

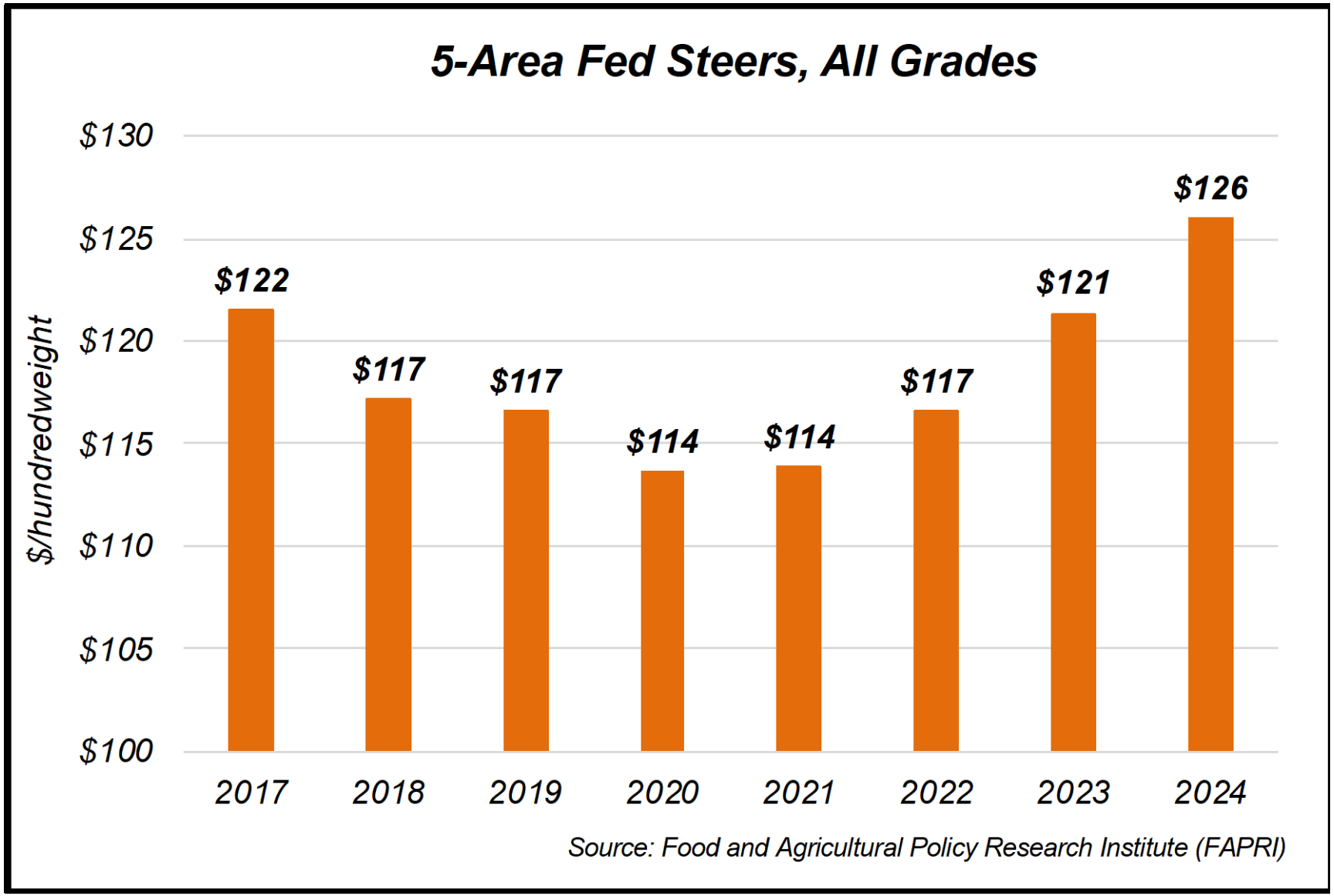
WHO IS GONNA EAT ALL THIS MEAT?

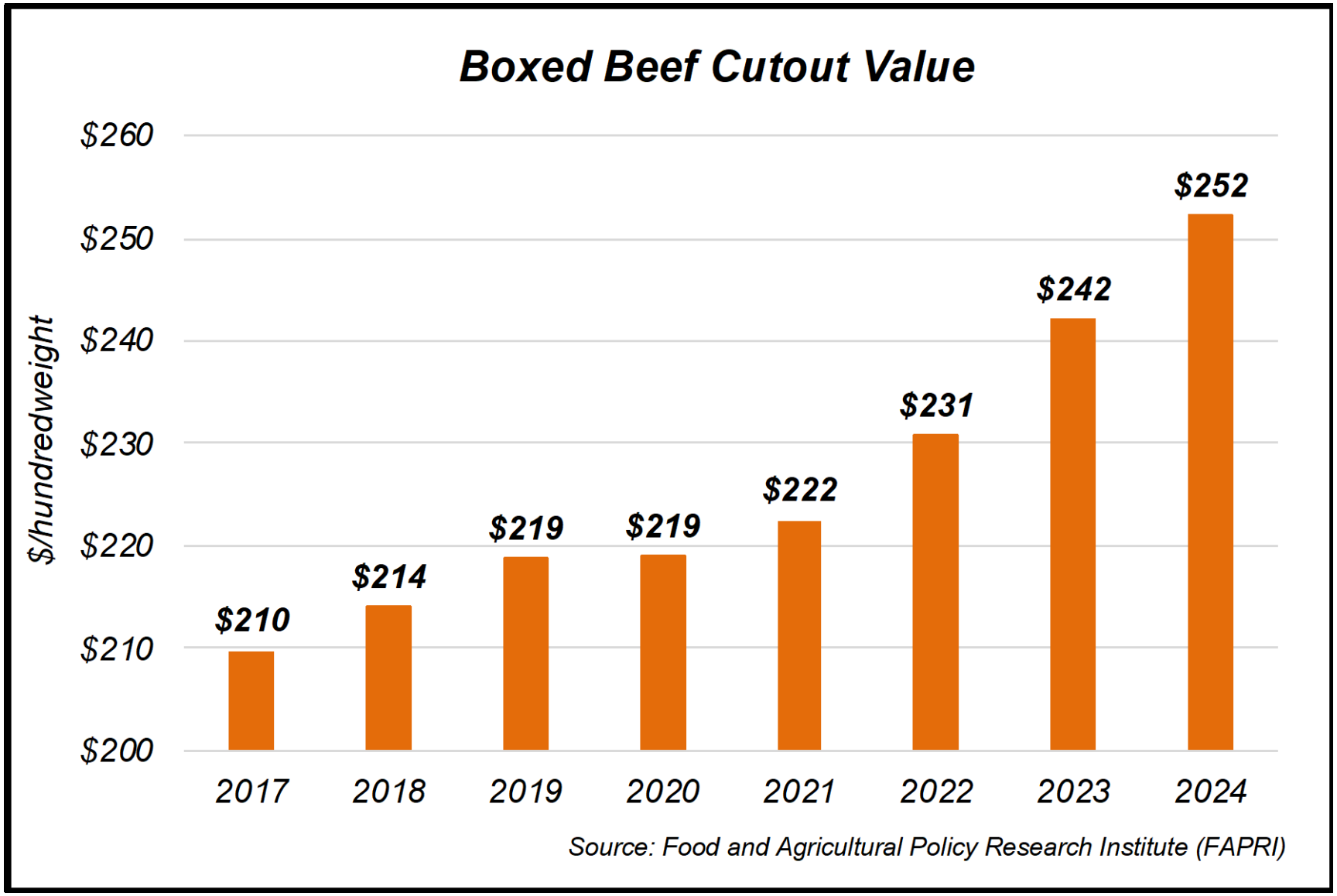


Can Exports Save The Day?



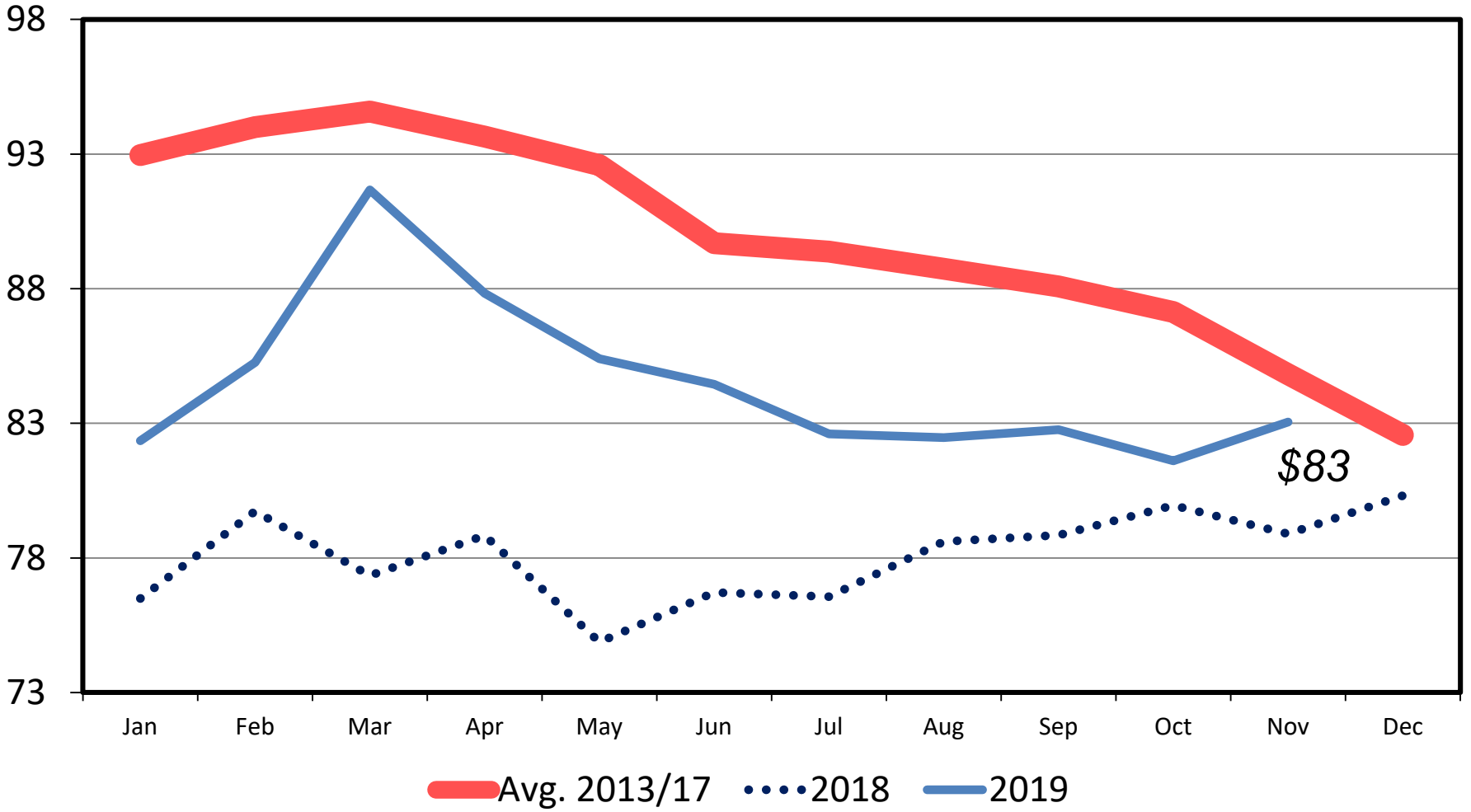

Oklahoma City Feeder Steers, 600 - 650 lbs.
$/hundredweight
$180
$170
$160
$150
$140
$130
$156
$159
$154
$145
$150
$154
$162
$170
2017
2018
2019
2020
2021
2022
2023
2024
Source: Food and Agricultural Policy Research Institute (FAPRI)


5-Area Fed Steers, All Grades
$/hundredweight
$130
$125
$120
$115
$110
$105
$100
$122
$117
$117
$114
$114
$117
$121
$126
2017
2018
2019
2020
2021
2022
2023
2024
Source: Food and Agricultural Policy Research Institute (FAPRI)


Boxed Beef Cutout Value
$/hundredweight
$260
$250
$240
$230
$220
$210
$200
$210
$214
$219
$219
$222
$231
$242
$252
2017
2018
2019
2020
2021
2022
2023
2024
Source: Food and Agricultural Policy Research Institute (FAPRI)

KANSAS FEEDLOT CLOSEOUTS

Feeding Costs per Cwt., Steers



Data Source: KSU Focus on Feedlots, Compiled by LMIC

01/07/20

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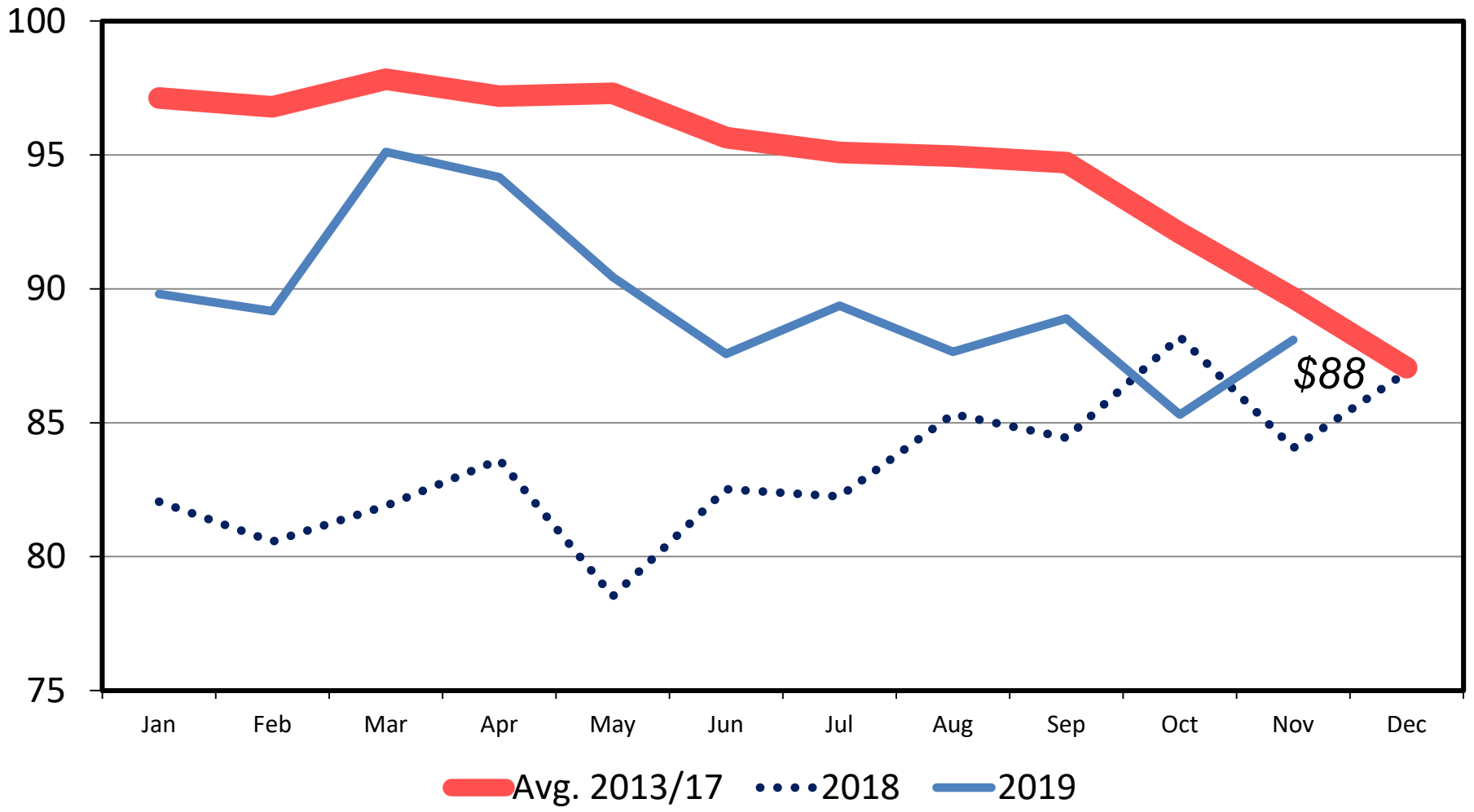
KANSAS FEEDLOT CLOSEOUTS

Feeding Costs per Cwt., Heifers



Data Source: KSU Focus on Feedlots, Compiled by LMIC

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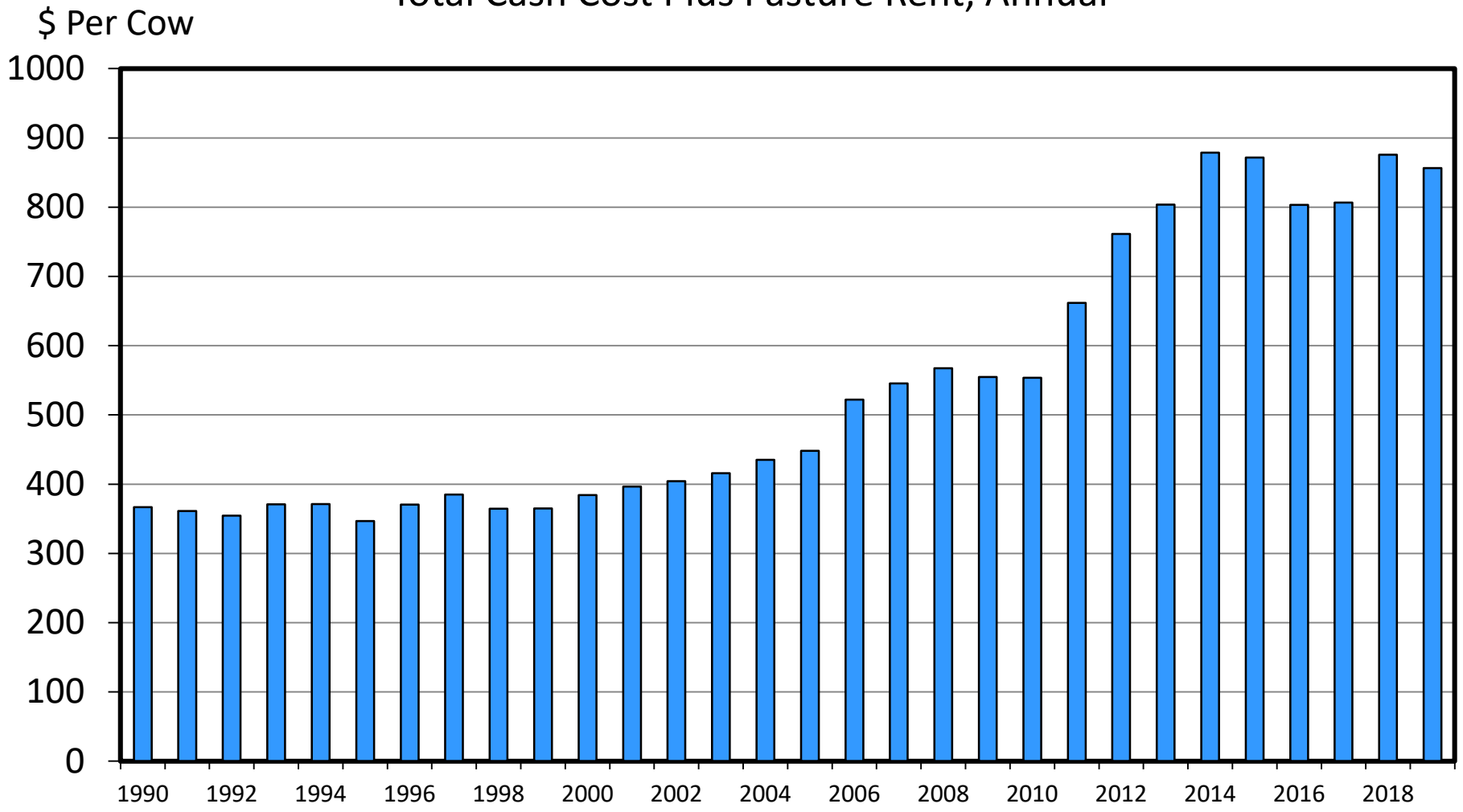
ESTIMATED AVERAGE COW CALF COSTS

Total Cash Cost Plus Pasture Rent, Annual



Data Source: USDA & LMIC, Compiled by LMIC

02/05/20

Livestock Marketing Information Center

ure 2. Total Chapter 12 Farm Bankruptcies by

2019 Calendar Year

Don't Fall Off The Mountain

FARM BUREAU®

The Economic Impact of Grazing Stockpiled Warm-Season Perennial Forages on North Florida Farms

Chris Prevatt

UF/IFAS Range Cattle REC

2019 NACAA – AM/PIC

Fort Wayne, IN

September 10, 2019

Mark Mauldin, Justin Walker, Kim Mullenix, Jennifer Tucker, Marcelo Wallau, Jane Cant, and J.K. Yarborough

Situation

Many cow-calf operations in North Florida begin feeding hay in early November and continue through late March.

- *Stockpiled grazing is the practice of allowing forage to grow during the late summer and early fall for grazing after the growing season has ended.*
  - *Defer grazing by allowing forages to accumulate for grazing at a later time.*

Method

Stockpiling demonstrations were conducted on Five North Florida Farms using stockpiled bahiagrass to feed beef cows during the late fall and early winter.

- *August 2018 – January 2019*

Today, we will discuss the details of one producers experience stockpiling bahiagrass.

Use What You Got

- *Bahiagrass is a common warm-season perennial grass in Florida. While traditionally it is not the best suited forage species for stockpiled grazing, it is the most abundant forage species available to producers.*

2018-2019 Stockpiled Grazing

- *Began Stockpiling Bahiagrass: August 1*
- *Stockpiled for 103 Days*
- *Began Grazing Stockpiled Bahiagrass: November 12*
- *Grazed for 54 days*
- *Ended Grazing Stockpiled Bahiagrass: January 5*

2018-2019 Stockpiled Grazing

- *Began Stockpiling Bahiagrass: August 1*
- *Stockpiled for 103 Days*
- *Began Grazing Stockpiled Bahiagrass: November 12*
- *Grazed for 54 days*
- *Ended Grazing Stockpiled Bahiagrass: January 5*

No Nitrogen Application, Just Deferred Grazing, No Rotational Grazing, Continuous Access (Still working on this…)

2018-2019 Stockpiled Grazing

Let's talk about money saved from grazing stockpiled bahiagrass

2018-2019 Stockpiled Grazing

1 Roll of Bahiagrass Hay (850 DM lbs.) @ $45/Roll

2.35 Rolls of Bahiagrass/DM ton

*2.35 Rolls/DM ton * $45/Roll = $106/DM ton*

$106 / 2,000 lbs. = $0.053/DM lb.

1,200 lb. Gestating Beef Beef Cow during the Last 1/3 of her pregnancy requires a dry matter intake of 2.0% of her body weight, or 24 DM lbs.

*$0.053 * 24 DM lbs. = $1.27/beef cow/day*

(with no hay waste, storage, or feeding costs included, just the cost of the hay)

2018-2019 Stockpiled Grazing

Assumption 1: *There was easily 15% hay waste once they started feeding hay in January. Some rolls there was more, some there was less. This brings the amount of DM Hay required to 27.6 DM lbs.*

Assumption 2: *Feeding hay using a tractor burns fuel and costs money. Additionally, the barn the hay sits under is nice. We'll add another $5 per roll to store and get it fed.*

Assumption 3: *Their time spent feeding hay is part of their labor and management. Additional labor costs were not accounted for in this analysis. If they had used hired labor, that would have been an added expense.*

2018-2019 Stockpiled Grazing

Original Cost: $106/DM ton

New Cost: $111/DM ton

Original Dry Matter Intake: 24 DM lbs./beef cow/day

New Dry Matter Intake: 27.6 DM lbs./beef cow/day

*Original Cost: $0.053 * 24 DM lbs. = $1.27/beef cow/day*

*New Cost: $0.055 * 27.6 DM lbs. = $1.53/beef cow/day*

2018-2019 Stockpiled Grazing

Original Cost: $106/DM ton

New Cost: $111/DM ton

Original Dry Matter Intake: 24 DM lbs./beef cow/day

New Dry Matter Intake: 27.6 DM lbs./beef cow/day

*Original Cost: $0.053 * 24 DM lbs. = $1.27/beef cow/day*

For 54 Days: $68/beef cow

*New Cost: $0.055 * 27.6 DM lbs. = $1.53/beef cow/day*

For 54 Days: $82/beef cow

You can save $82/beef cow each winter grazing "dead grass"
- Chris Prevatt

An Economic Evaluation of Feeder Calves Preconditioned on Warm-Season Annual Forages in the Southeastern USA

Chris Prevatt

UF/IFAS Range Cattle REC

2019 NACAA – AM/PIC

Fort Wayne, IN

September 10, 2019

Variables Evaluated

- ***Forage Production Costs, $/DM ton consumed***
- ***Supplemental Feedstuffs, $/DM ton consumed***
- ***Feeding Costs, $/DM ton consumed***

- *Feeder Calf Performance*
  - *(Preconditioned and Non-Preconditioned)*
- *Difference in Weight*
- *Yardage or Land Rent*
- *Land Rent*
- *Animal Health Program Costs*
  - *Vaccinations, Mineral and Vitamins, Water, Shade*
- *Marketing Expenses*
- *Death Loss*
- *Shrink*
- *Price Margin between Preconditioned (Weaned) and Non-Preconditioned (Unweaned) Feeder Calves*
- *Facilities (Working and Shipping)*

Double Crop Annual Forages

- *Cool-Season Annual Forage Mix*
- *Warm-Season Annual Forage Mix*

Preconditioning on Warm-Season Annual Forages

60-Day Preconditioning Program

Feeder Calf Performance

- *Target Average Daily Gain during Preconditioning*
  - *1.40 – 1.60 lbs./head/day*

- *Animal Production Costs: ?*
- *Forage Production Costs: ?*

- *<u>Warm-Season Annual Forages</u>*
  - *Grazing for 60 days (minimum)*

- *<u>Supplemental Feedstuffs</u>*
  - ***Energy Supplement** @ 0.25% of BW for 60 days*

An Economic Analysis of Warm-Season Annual Forage Cost Per Dry Matter Ton Consumed For Various Levels of Forage Production and Production Costs Per Acre									
Forage Production, DM lbs./acre	*Forage Consumption*, DM lbs./acre*	*Warm-Season Annual Forage Production Costs, $/acre*							
		$100	*$120*	*$140*	*$160*	*$180*	*$200*	*$220*	*$240*
		Total Cost of Growing and Grazing Per Dry Matter Ton Consumed							
6,000	*3,000*	*$67*	*$80*	*$93*	*$107*	*$120*	*$133*	*$147*	*$160*
7,000	*3,500*	*$57*	*$69*	*$80*	*$91*	*$103*	*$114*	*$126*	*$137*
8,000	*4,000*	*$50*	*$60*	*$70*	*$80*	*$90*	*$100*	*$110*	*$120*
9,000	*4,500*	*$44*	*$53*	*$62*	*$71*	*$80*	*$89*	*$98*	*$107*
10,000	*5,000*	*$40*	*$48*	*$56*	*$64*	*$72*	*$80*	*$88*	*$96*
11,000	*5,500*	*$36*	*$44*	*$51*	*$58*	*$65*	*$73*	*$80*	*$87*
12,000	*6,000*	*$33*	*$40*	*$47*	*$53*	*$60*	*$67*	*$73*	*$80*
13,000	*6,500*	*$31*	*$37*	*$43*	*$49*	*$55*	*$62*	*$68*	*$74*

**For this analysis the level of forage utilization was assumed to be 50 percent of forage production (column one x .50).*

An Economic Analysis of Warm-Season Annual Forage Cost Per Dry Matter Ton Consumed For Various Levels of Forage Production and Production Costs Per Acre									
Forage Production, DM lbs./acre	*Forage Consumption*, DM lbs./acre*	*Warm-Season Annual Forage Production Costs, $/acre*							
		$100	*$120*	*$140*	*$160*	*$180*	*$200*	*$220*	*$240*
		*Total Cost of Growing and Grazing Per Dry Matter Ton Consumed**							
6,000	*3,000*	*$67*	*$80*	*$93*	*$107*	*$120*	*$133*	*$147*	*$160*
7,000	*3,500*	*$57*	*$69*	*$80*	*$91*	*$103*	*$114*	*$126*	*$137*
8,000	*4,000*	*$50*	*$60*	*$70*	*$80*	*$90*	*$100*	*$110*	*$120*
9,000	*4,500*	*$44*	*$53*	*$62*	*$71*	*$80*	*$89*	*$98*	*$107*
10,000	*5,000*	*$40*	*$48*	*$56*	*$64*	*$72*	*$80*	*$88*	*$96*
11,000	*5,500*	*$36*	*$44*	*$51*	*$58*	*$65*	*$73*	*$80*	*$87*
12,000	*6,000*	*$33*	*$40*	*$47*	*$53*	*$60*	*$67*	*$73*	*$80*
13,000	*6,500*	*$31*	*$37*	*$43*	*$49*	*$55*	*$62*	*$68*	*$74*

**For this analysis the level of forage utilization was assumed to be 50 percent of forage production (column one x .50).*

***The total cost of growing and grazing warm-season annual forages is lower than the cost of using a comparable high quality feedstuff ($174) in the yellow highlighted areas.*

Warm-Season Annual Forages Preconditioning and Backgrounding Evaluation

Table 1. Estimated Profit/Loss per head from Preconditioning Feeder Calves based on Varying Price Margins and Forage Costs

Feeder Calf Price	*Feeder Calf Price*	*Price Margin*	*Warm-Season Annual Forage Cost, $/ton consumed*							
*Non-Preconditionied**	*Preconditioned**		$50	$75	$100	$125	$150	$175	$200	$225
$/cwt.	*$/cwt.*	*$/cwt.*	*Estimated Preconditioning Profit/Loss, $/head*							
$145.00	$135.00	-$10.00	$25	$14	$4	($7)	($17)	($28)	($38)	($49)
$145.00	$136.00	-$9.00	$31	$21	$10	($0)	($11)	($21)	($32)	($43)
$145.00	$137.00	-$8.00	$38	$27	$16	$6	($5)	($15)	($26)	($36)
$145.00	$138.00	-$7.00	$44	$33	$23	$12	$2	($9)	($20)	($30)
$145.00	$139.00	-$6.00	$50	$39	$29	$18	$8	($3)	($13)	($24)
$145.00	$140.00	-$5.00	$56	$46	$35	$25	$14	$4	($7)	($18)
$145.00	[illegible]	[illegible]	[illegible]	$52	$41	$31	$20	$10	($1)	($11)
$145.00	[illegible]	[illegible]	[illegible]	$58	$48	$37	$27	$16	$5	($5)
$145.00	[illegible]	[illegible]	[illegible]	$64	$54	$43	$33	$22	$12	$1
$145.00	[illegible]	[illegible]	[illegible]	$71	$60	$50	$39	$29	$18	$7
$145.00	[illegible]	[illegible]	[illegible]	$77	$66	$56	$45	$35	$24	$14
$145.00	[illegible]	[illegible]	[illegible]	$83	$73	$62	$52	$41	$30	$20
$145.00	$147.00	$2.00	$100	$89	$79	$68	$58	$47	$37	$26
$145.00	$148.00	$3.00	$106	$96	$85	$75	$64	$54	$43	$32
$145.00	$149.00	$4.00	$113	$102	$91	$81	$70	$60	$49	$39
$145.00	$150.00	$5.00	$119	$108	$98	$87	$77	$66	$55	$45
Preconditioning Cost Per Animal			$107	$118	$128	$139	$149	$160	$171	$181
Non-Preconditioning Cost Per Animal			$86	$86	$86	$86	$86	$86	$86	$86

$29 (*Feedstuffs*)
vs.
$60 (*WSAFM*)

**This analysis assumes that both preconditioned and non-preconditioned feeder calves are marketed off of the farm in truckload units*

Warm-Season Annual Forages Preconditioning and Backgrounding Evaluation

Table 1. Estimated Profit/Loss per head from Preconditioning Feeder Calves based on Varying Price Margins and Forage Costs

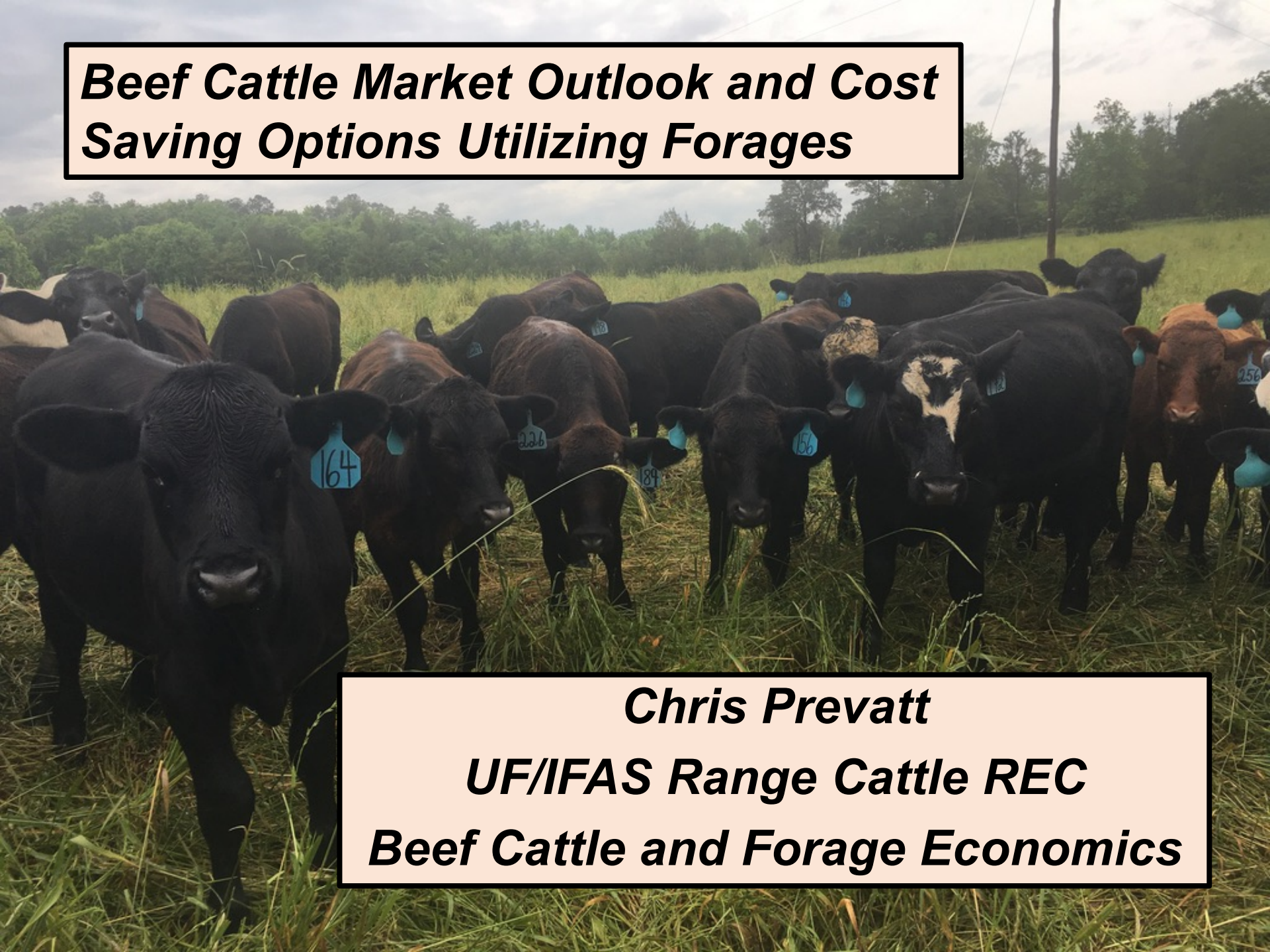
Feeder Calf Price	*Feeder Calf Price*		*Warm-Season Annual Forage Cost, $/ton consumed*							
*Non-Preconditionied**	*Preconditioned**	*Price Margin*	$50	$75	$100	$125	$150	$175	$200	$225
$/cwt.	*$/cwt.*	*$/cwt.*	*Estimated Preconditioning Profit/Loss, $/head*							
$145.00	$135.00	-$10.00	$2,001	$1,157	$313	($530)	($1,374)	($2,218)	($3,062)	($3,905)
$145.00	$136.00	-$9.00	$2,501	$1,657	$813	($30)	($874)	($1,718)	($2,562)	($3,405)
$145.00	$137.00	-$8.00	$3,001	$2,157	$1,313	$470	($374)	($1,218)	($2,062)	($2,905)
$145.00									62)	($2,405)
$145.00									62)	($1,905)
$145.00	$140.00	-$5.00	$4,501	$3,657	$2,813	$1,970	$1,126	$282	($562)	($1,405)
$145.00	$141.00	-$4.00	$5,001	$4,157	$3,313	$2,470	$1,626	$782	($62)	($905)
$145.00	$142.00	-$3.00	$5,501	$4,657	$3,813	$2,970	$2,126	$1,282	$438	($405)
$145.00	$143.00	-$2.00	$6,001	$5,157	$4,313	$3,470	$2,626	$1,782	$938	$95
$145.00	$144.00	-$1.00	$6,501	$5,657	$4,813	$3,970	$3,126	$2,282	$1,438	$595
$145.00	$145.00	$0.00	$7,001	$6,157	$5,313	$4,470	$3,626	$2,782	$1,938	$1,095
$145.00	$146.00	$1.00	$7,501	$6,657	$5,813	$4,970	$4,126	$3,282	$2,438	$1,595
$145.00	$147.00	$2.00	$8,001	$7,157	$6,313	$5,470	$4,626	$3,782	$2,938	$2,095
$145.00	$148.00	$3.00	$8,501	$7,657	$6,813	$5,970	$5,126	$4,282	$3,438	$2,595
$145.00	$149.00	$4.00	$9,001	$8,157	$7,313	$6,470	$5,626	$4,782	$3,938	$3,095
$145.00	$150.00	$5.00	$9,501	$8,657	$7,813	$6,970	$6,126	$5,282	$4,438	$3,595
Preconditioning Cost Per Animal			$107	$118	$128	$139	$149	$160	$171	$181
Non-Preconditioning Cost Per Animal			$86	$86	$86	$86	$86	$86	$86	$86

Would an extra $4,800/truckload help pay the bills?

**This analysis assumes that both preconditioned and non-preconditioned feeder calves are marketed off of the farm in truckload units*


$5,000
UF UNIVERSITY of FLORIDA
IFAS Extension

Beef Cattle Market Outlook and Cost Saving Options Utilizing Forages



Chris Prevatt

UF/IFAS Range Cattle REC

Beef Cattle and Forage Economics