

Beef-Cattle Market Outlook

**Lincoln, KS
April 14, 2015**

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Dept. of Agricultural Economics Kansas State University**

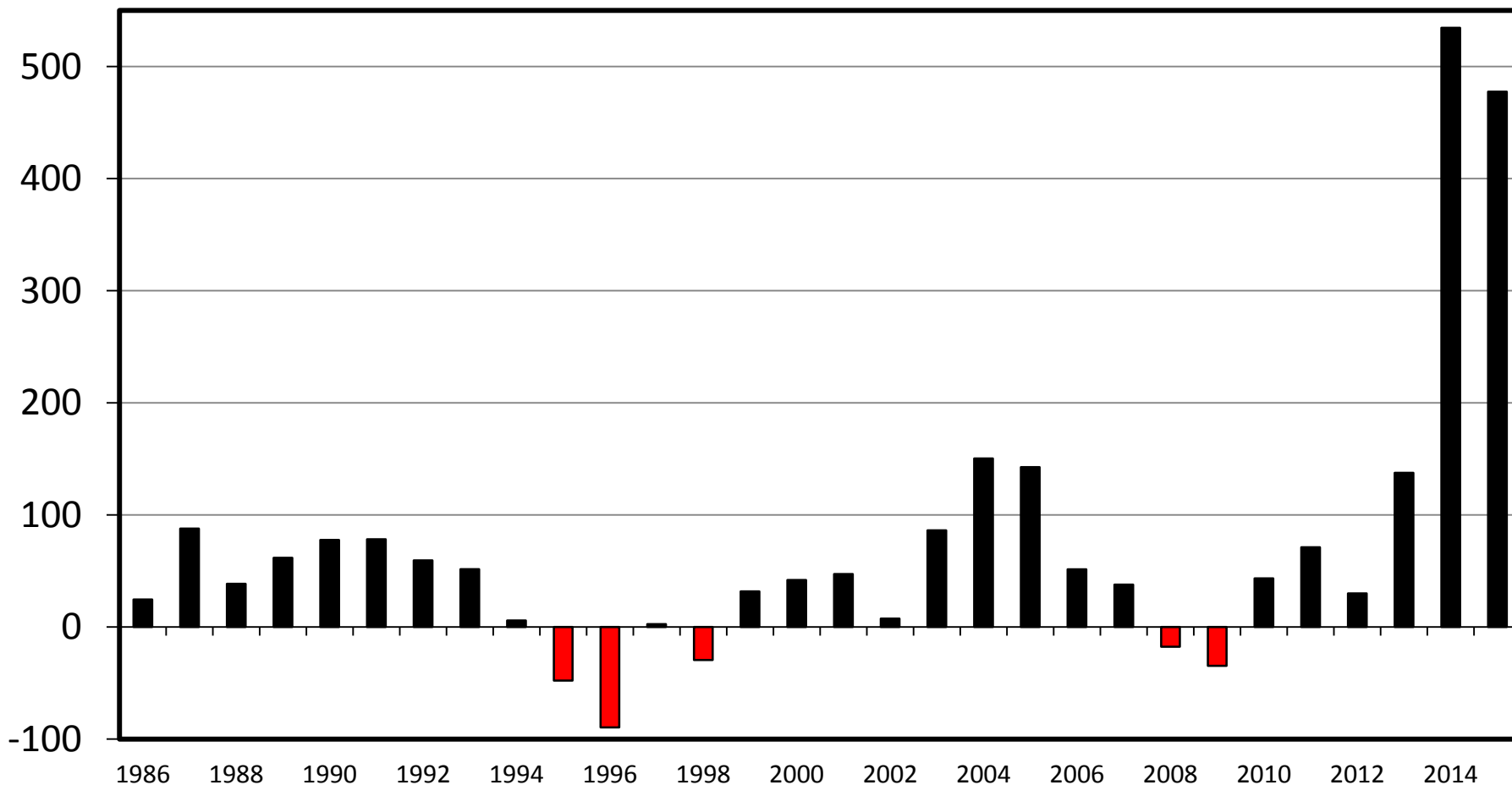
Overarching Beef Industry Economic Outlook

- Supplies
 - Historically tight; herd expansion is underway
- Demand
 - Very strong in 2014; mixed signals to-date in 2015...
- Combined:
 - “Historic” price levels, excitement, & uncertainty...

ESTIMATED AVERAGE COW CALF RETURNS

Returns Over Cash Cost (Includes Pasture Rent), Annual

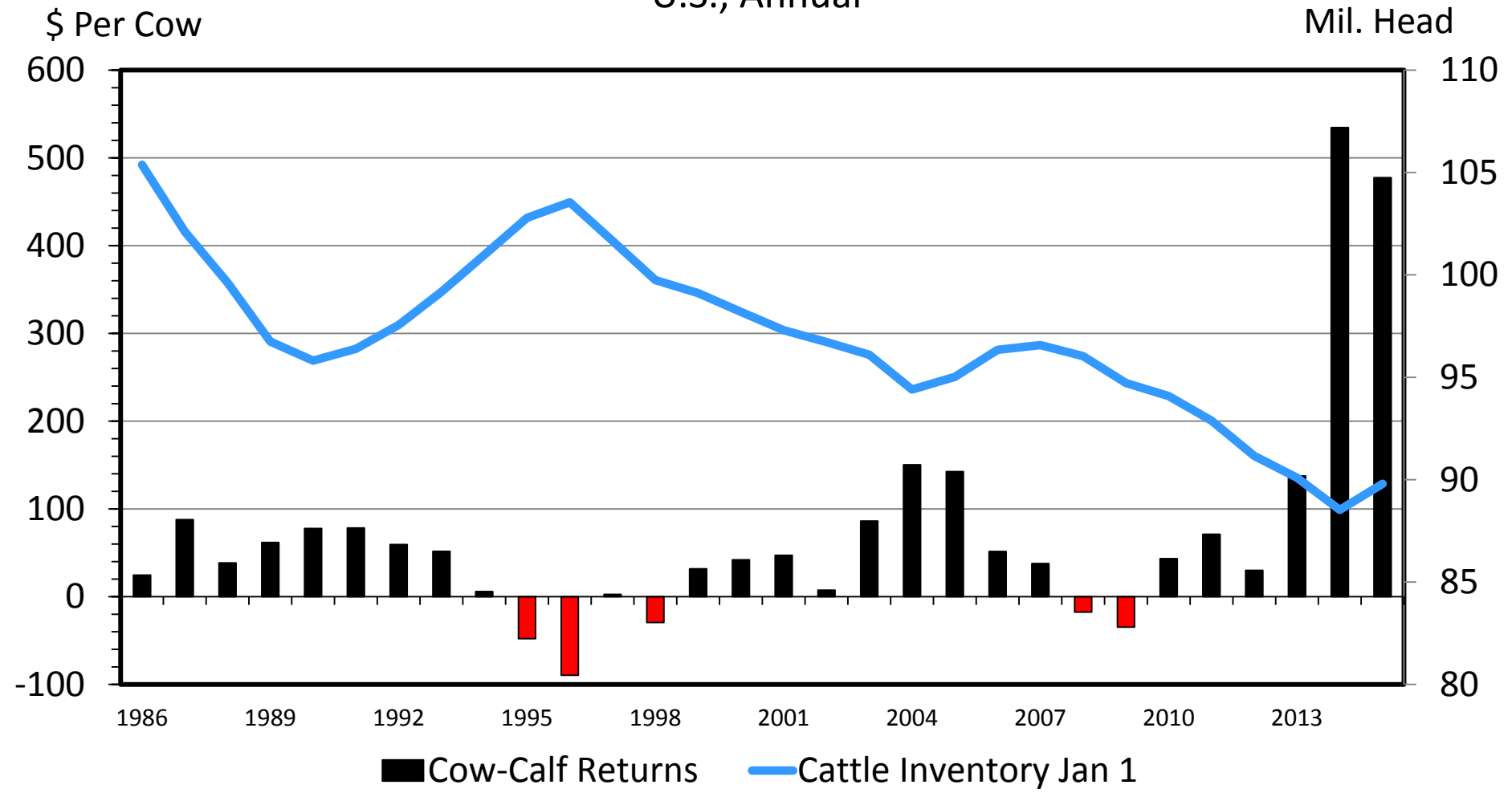
\$ Per Cow



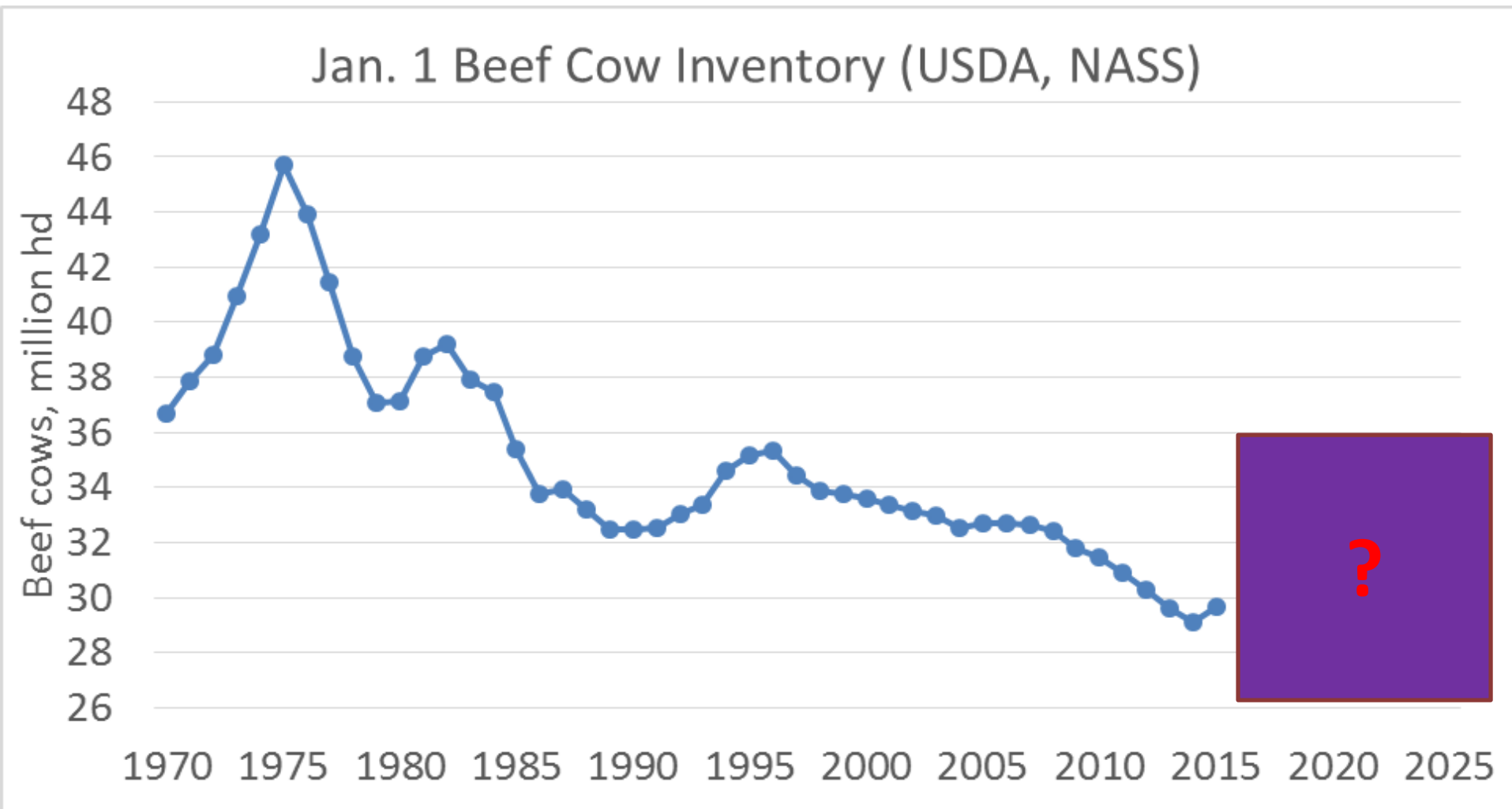
What do cow-calf producers do following “high” returns?

COW-CALF RETURNS AND CATTLE INVENTORY

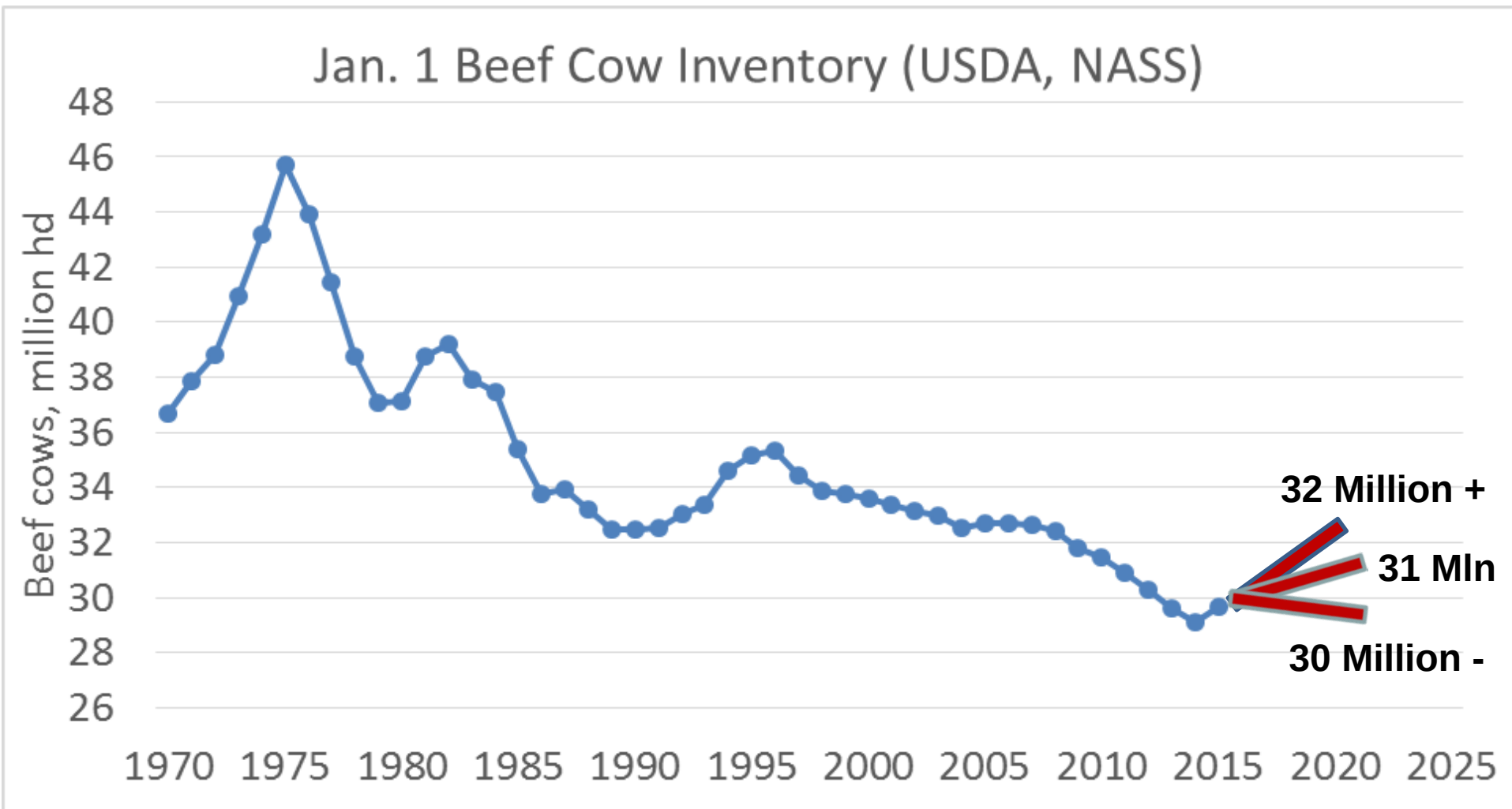
U.S., Annual



Where will cow numbers go from current levels?



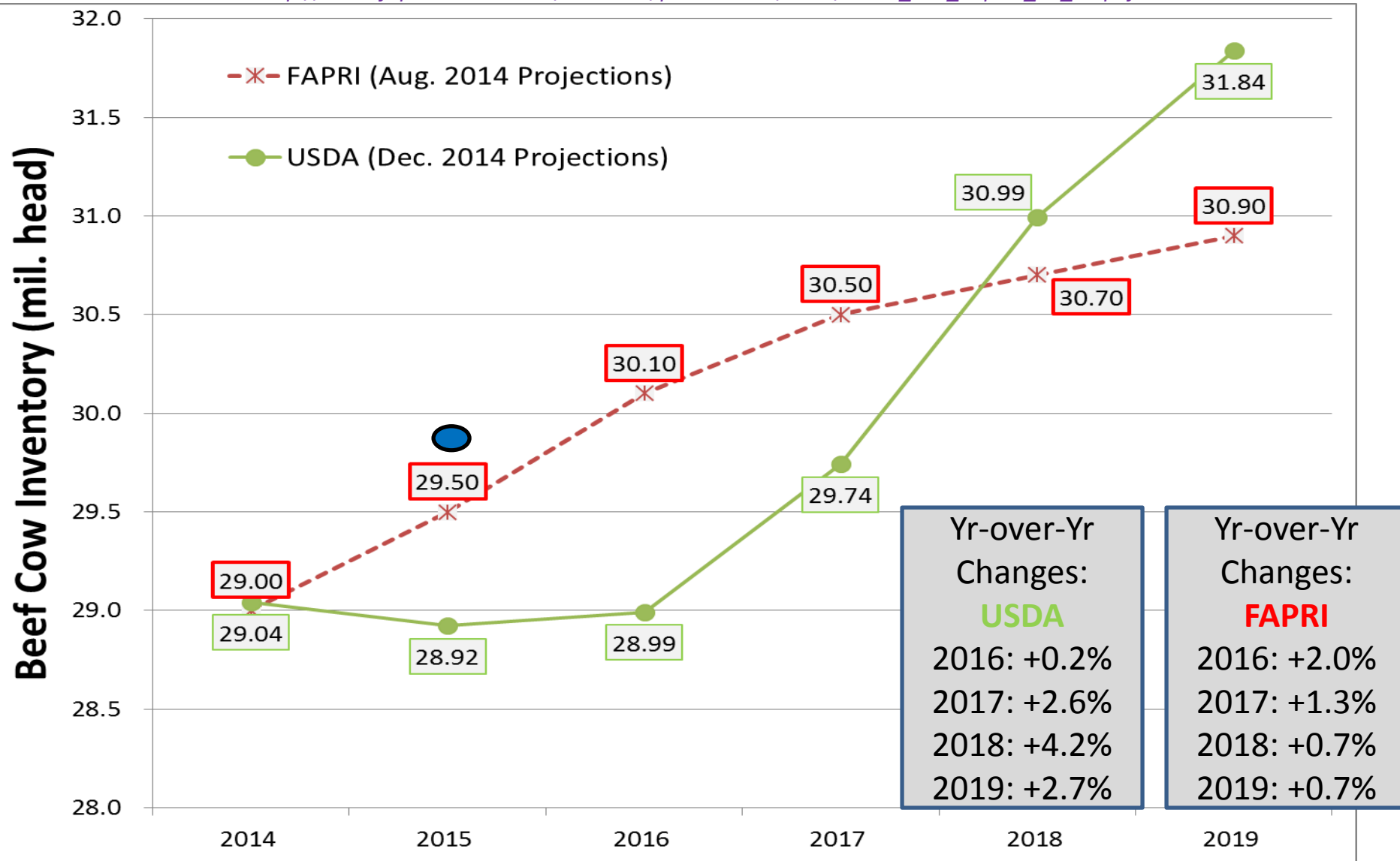
Where will cow numbers go from current levels?



How Much Expansion? USDA & FAPRI Projections

<http://www.ers.usda.gov/publications/oce-usda-agricultural-projections.aspx>

http://www.fapri.missouri.edu/outreach/publications/2014/FAPRI_MU_Report_04_14.pdf



Cow-Calf – Expansion Discussion

- *Why Did Herd Shrink?*
 - *Beef Demand Declines (long-term)*
 - *More Beef per Cow (long-term)*
 - *Drought & Feed Costs (more recent)*
- *What Can I pay for a Replacement?*
 - *KSU-Beef Replacement* spreadsheet (**12/24/2014 update**)
 - Two fact sheets and video tutorial also available online:
 - <http://www.agmanager.info/livestock/budgets/production/default.asp>

Cow-Calf – Expansion Discussion

- KSU-Beef Replacement*** spreadsheet

– <http://www.agmanager.info/livestock/budgets/production/default.asp>

Net Present Value of Beef Replacements
(Dec. 2014 version)

Key Inputs Varied Across Scenarios:

			Annual cow costs, \$/year	\$700
	Number		Discount rate	7.50%
			Calf Price, \$/cwt	2015
				\$225
				2016
				\$213
				2017
				\$201
				2018
				\$198
				2019
				\$189
				2020
				\$183
				2021
				\$181
				2022
				\$178
				2023
				\$181
				2024
				\$186

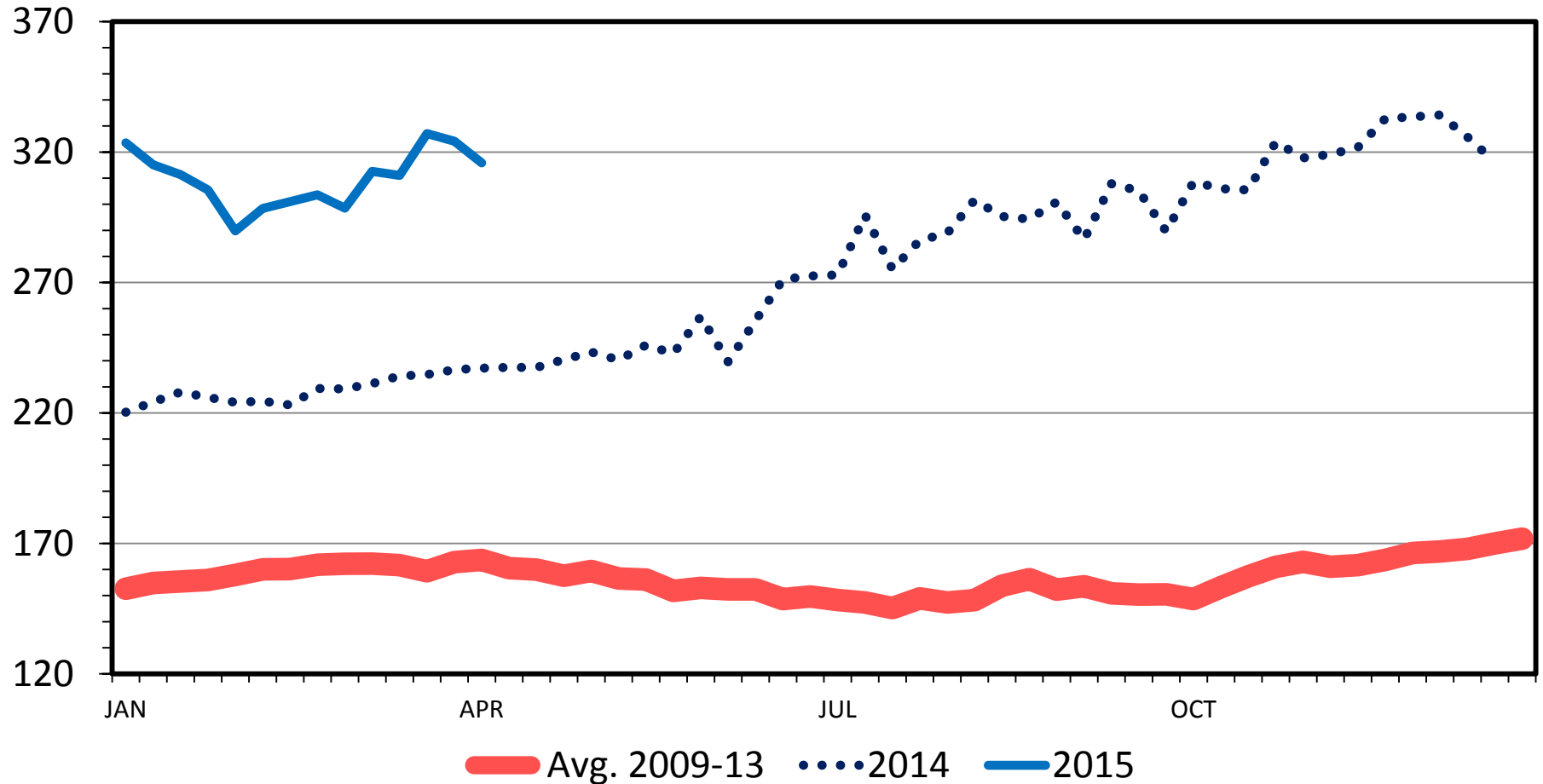
Year	Number of Calves	Base Case
2015	1	\$1,725
2016	2	\$1,936
2017	3	\$2,074
2018	4	\$2,203
2019	5	\$2,274
2020	6	\$2,322
2021	7	\$2,359
2022	8	\$2,384
2023	9	\$2,407
2024	10	\$2,428

* NPV is Net Present Value of a replacement expected to produce the number of saleable calves listed in the "Number of Calves" column before a cow is culled for age-related reasons.

MED. & LRG. #1 STEER CALF PRICES

400-500 Pounds, Southern Plains, Weekly

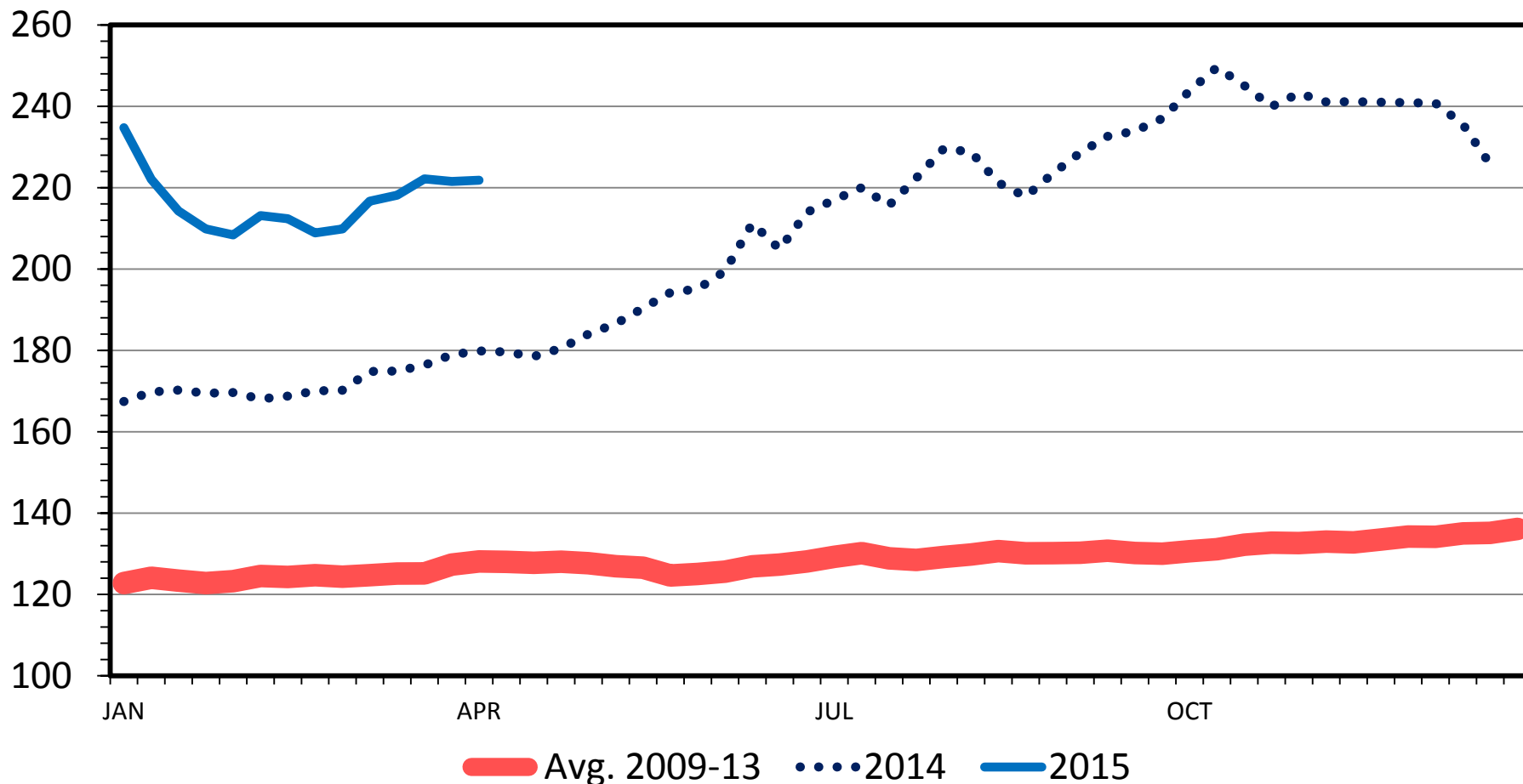
\$ Per Cwt.



MED. & LRG. #1 FEEDER STEER PRICES

700-800 Pounds, Southern Plains, Weekly

\$ Per Cwt.



Economic Outlook Overview: 2015 Fall Sales for Cow-Calf Producers

- Salina, KS 4/14/15 situation:
 - Sell 550 lb calf on 9/21/15 (\$224.58)

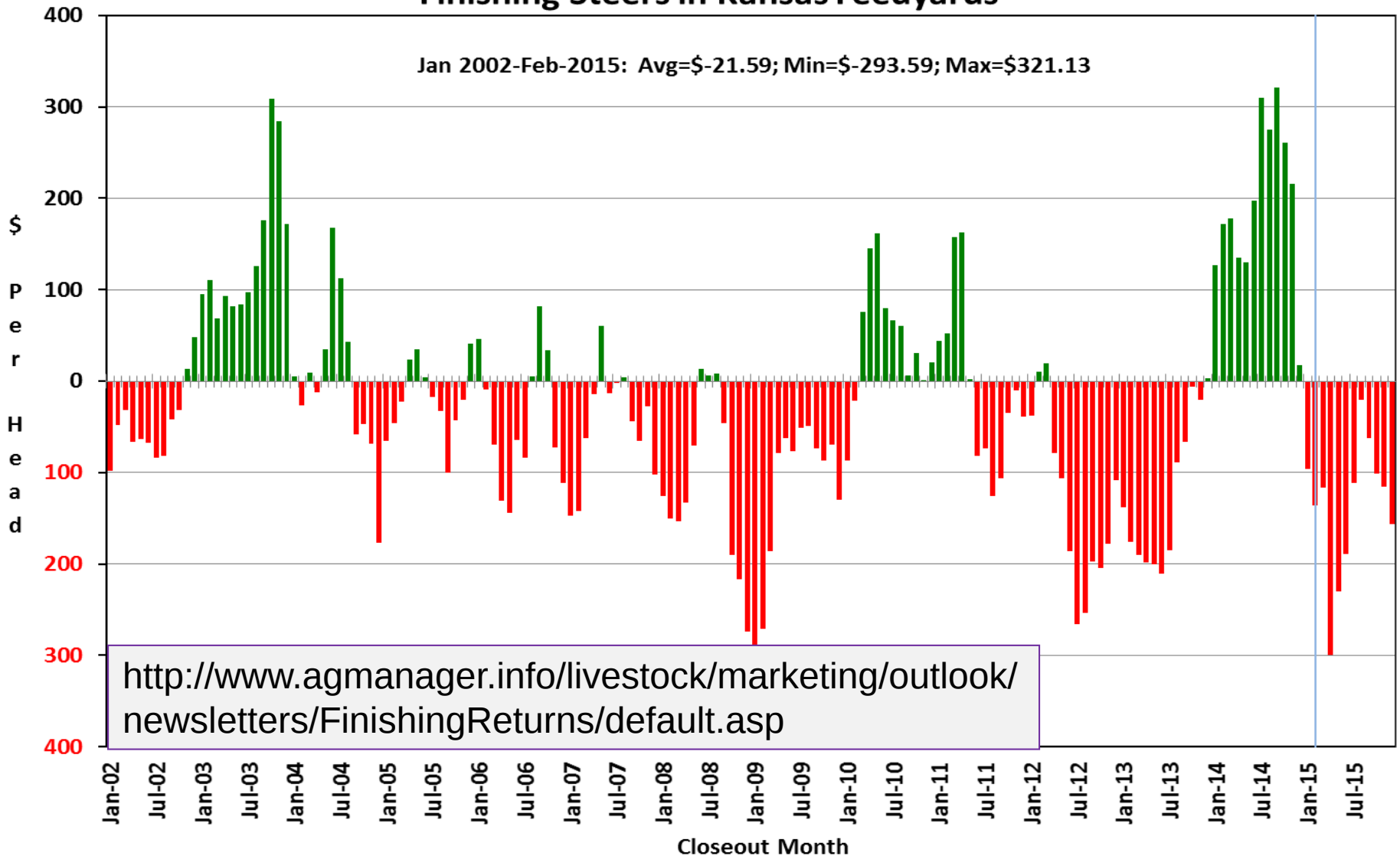
OCT FC:	\$209.83/cwt
<u>+ Exp. Basis:</u>	<u>\$ 14.75/cwt</u>
= Exp. Cash Price:	\$224.58/cwt

Economic Outlook Overview: 2015 Fall Backgrounder/Stocker Producers

- Salina, KS 4/14/15 situation:
 - Buy 550 lb calf on 9/21/15 (\$224.58)
 - Sell 750 lb steer on 1/6/16 (\$198.58)
- Exp. VOG: \$127.08/cwt
- **IF COG \$90/cwt THEN Exp. Profit = +/- \$74/hd**

Economic Outlook Overview: Feedlots

Figure 1. Historical & Projected Average Net Returns for Finishing Steers in Kansas Feedyards



Historical and Projected Kansas Feedlot Net Returns (as of 4/13/15')

(<http://www.agmanager.info/livestock/marketing/outlook/newsletters/FinishingReturns/default.asp>)

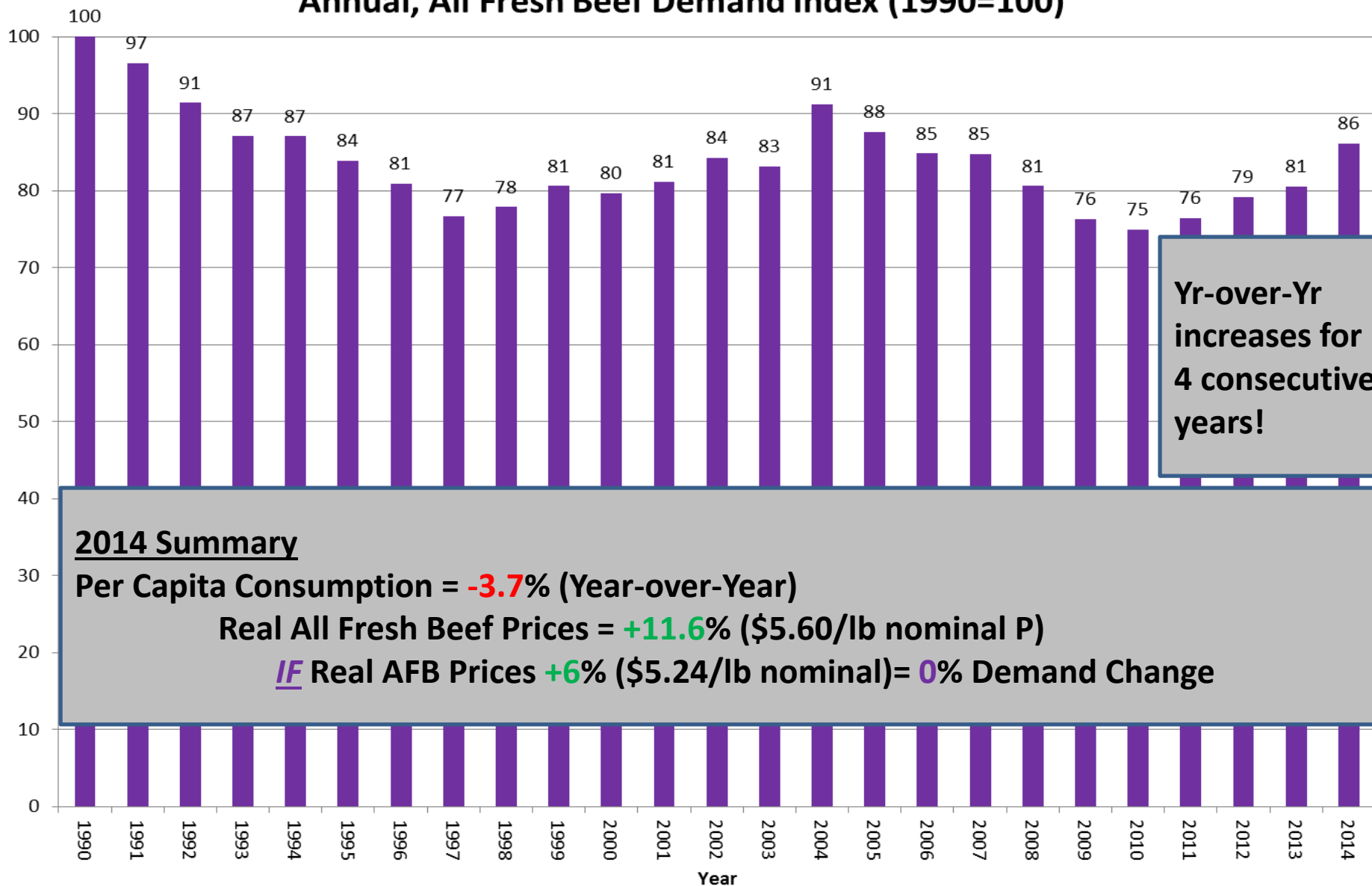
Table 1. Projected Values for Finishing Steers in Kansas Feedyards*

Closeout Mo-Yr	Net Return	FCOG**	Fed Price	Feeder Price	Breakeven FCOG**	Breakeven Fed Price	Breakeven Feeder Price
Mar-15	-116.47	86.18	162.40	229.37	66.47	170.85	214.57
Apr-15	-299.14	86.48	151.59	234.40	35.20	173.69	195.57
May-15	-230.08	84.44	154.52	238.10	46.66	171.61	206.90
Jun-15	-189.41	82.84	149.04	222.13	52.04	162.77	197.37
Jul-15	-111.59	82.34	146.99	208.68	64.32	155.01	194.25
Aug-15	-20.81	82.57	149.22	201.96	79.28	150.70	199.28
Sep-15	-62.00	83.32	149.04	207.45	73.66	153.44	199.37
Oct-15	-100.96	86.39	150.94	209.38	70.11	158.07	196.70
Nov-15	-115.12	86.99	150.17	210.40	68.37	158.38	195.71
Dec-15	-156.52	88.89	149.20	209.11	63.12	160.21	189.88

Representative Barometer for Trends in Profitability

Annual, All Fresh Beef Demand Index (1990=100)

Demand Index (1990=100)



2014 Summary

Per Capita Consumption = **-3.7%** (Year-over-Year)

Real All Fresh Beef Prices = **+11.6%** (\$5.60/lb nominal P)

IF Real AFB Prices **+6%** (\$5.24/lb nominal) = **0%** Demand Change

Source: Glynn T. Tonsor, Kansas State University, Jan. 2015

<http://www.agmanager.info/livestock/marketing/Beef%20Demand/default.asp>

Quarterly Forecasts (LMIC: 4/12/15)

		% Chg.	Average	% Chg.	Comm'l	% Chg.
Year	Comm'l	from	Dressed	from	Beef	from
Quarter	Slaughter	Year Ago	Weight	Year Ago	Production	Year Ago
2014						
I	7,374	-5.2	795.7	0.3	5,868	-5.0
II	7,836	-5.9	789.0	0.9	6,183	-5.1
III	7,630	-8.3	809.6	1.9	6,178	-6.5
IV	7,329	-8.8	821.7	2.8	6,023	-6.2
Year	30,170	-7.1	803.8	1.5	24,251	-5.7
2015						
I	6,967	-5.5	814.0	2.3	5,671	-3.4
II	7,603	-3.0	805.5	2.1	6,124	-1.0
III	7,478	-2.0	820.4	1.3	6,135	-0.7
IV	7,295	-0.5	823.7	0.2	6,009	-0.2
Year	29,343	-2.7	815.8	1.5	23,939	-1.3
2016						
I	7,044	1.1	820.7	0.8	5,781	1.9
II	7,487	-1.5	810.1	0.6	6,065	-1.0
III	7,637	2.1	827.0	0.8	6,316	3.0
IV	7,375	1.1	828.3	0.6	6,109	1.7
Year	29,543	0.7	821.5	0.7	24,271	1.4

Quarterly Forecasts (LMIC: 4/12/15)

	Live Sltr.	% Chg.	Feeder Steer Price	
Year	Steer Price	from	Southern Plains	
Quarter	5-Mkt Avg	Year Ago	7-800#	5-600#
2014				
I	146.34	16.6	171.77	209.30
II	147.82	18.3	193.16	227.67
III	158.49	29.6	225.93	263.14
IV	165.59	26.6	239.81	285.63
Year	154.56	22.8	207.67	246.44
2015				
I	162.43	11.0	215.87	276.14
II	160-163	9.3	218-221	277-285
III	156-159	-0.6	216-220	270-276
IV	157-161	-4.0	212-218	260-267
Year	159-161	3.5	215-219	270-277
2016				
I	157-162	-1.8	210-217	262-271
II	156-162	-1.5	211-219	265-275
III	152-159	-1.3	205-216	259-268
IV	154-162	-0.6	202-212	249-260
Year	156-160	-1.3	209-214	259-268

USDA Long-Term projections (2015-2024)

Early release on Dec. 18, 2014

Feb. 11, 2015 report (<http://www.usda.gov/oce/commodity/projections/index.htm>)

Recent

NEXT 5 YEARS

10 Yrs Out

Per capita meat consumption, retail weight

Item	2013	2014	2015	2016	2017	2018	2019	2024
<i>Pounds</i>								
Beef	56.3	54.6	52.2	49.4	48.5	49.1	49.8	52.4
Pork	46.8	45.3	46.6	48.5	48.8	49.1	49.3	49.5
Total red meat	104.4	101.1	99.9	99.0	98.4	99.3	100.1	102.9
Broilers	81.9	83.4	85.4	86.7	88.1	89.2	90.2	93.1
Turkeys	16.0	15.7	15.8	16.2	16.5	16.7	16.8	17.3
Total poultry	99.2	100.3	102.5	104.2	106.0	107.3	108.4	111.9
Red meat & poultry	203.6	201.4	202.3	203.2	204.4	206.5	208.5	214.8

2024 (215 lbs) <
2008 (216 lbs)

USDA Long-Term projections (2015-2024)

Early release on Dec. 18, 2014

Feb. 11, 2015 report (<http://www.usda.gov/oce/commodity/projections/index.htm>)

		Recent	NEXT 5 YEARS					10 Yrs Out	
Beef long-term projections									
Item	Units	2013	2014	2015	2016	2017	2018	2019	2024
Commercial production	Mil. lbs.	25,720	24,459	23,665	22,667	22,536	22,986	23,550	25,947
Change from previous year	Percent	-0.7	-4.9	-3.2	-4.2	-0.6	2.0	2.5	0.8
Total production	Mil. lbs.	25,791	24,530	23,736	22,738	22,607	23,057	23,621	26,018
Imports	Mil. lbs.	2,250	2,823	2,700	2,600	2,600	2,725	2,775	3,025
Total supply	Mil. lbs.	28,649	27,937	26,931	25,823	25,697	26,282	26,896	29,543
Exports	Mil. lbs.	2,590	2,599	2,525	2,543	2,662	2,800	2,935	3,475
Total consumption	Mil. lbs.	25,475	24,843	23,921	22,790	22,535	22,982	23,461	25,568
Per capita, retail weight	Pounds	56.3	54.6	52.2	49.4	48.5	49.1	49.8	52.4
Change from previous year	Percent	-1.8	-3.2	-4.4	-5.4	-1.8	1.3	1.4	0.0

USDA Long-Term projections (2015-2024)

Early release on Dec. 18, 2014

Feb. 11, 2015 report (<http://www.usda.gov/oce/commodity/projections/index.htm>)

		Recent		NEXT 5 YEARS					10 Yrs Out
Beef long-term projections									
Item	Units	2013	2014	2015	2016	2017	2018	2019	2024
Prices:									
Beef cattle, farm	\$/cwt	124.67	152.52	157.54	161.69	163.00	161.85	156.47	156.17
Calves, farm	\$/cwt	174.25	247.86	278.24	263.78	249.96	247.21	237.11	231.42
Steers, 5-area	\$/cwt	125.89	154.41	159.50	163.70	165.03	163.86	158.42	158.11
Feeder steers, Oklahoma City	\$/cwt	147.06	202.51	226.75	214.96	203.70	201.46	193.23	188.59
Feed price ratio:									
Beef cattle-corn	Ratio	18.1	34.2	45.0	47.6	46.6	46.2	44.7	42.2
Beef cow inventory	1,000 head	29,631	29,042	28,922	28,991	29,741	30,992	31,837	33,697

Risk Considerations: Quantitative Example & Decision Aide Demo

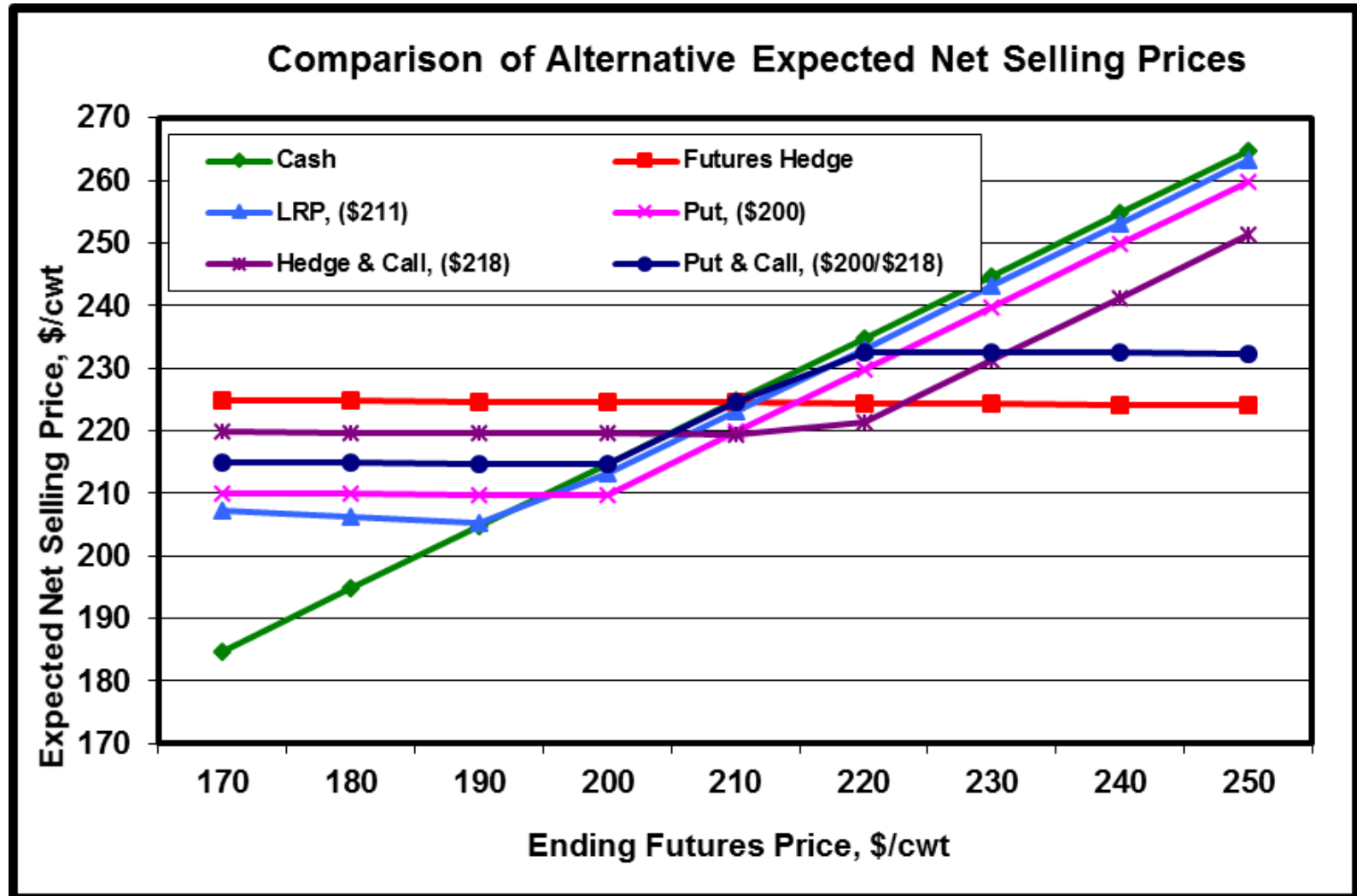
Cow-Calf Output Price Hedging Considerations (as of 4/14/15)

- Salina, KS 4/14/15 situation :
 - Sell 550 lb calves on 9/21/15 (\$224.58)
- Considering price protection on Sep sale
 - Or for stocker, consider protection for buy in Sep
 - **USE: *FeederCattleRiskMgmtTool.xlsx***

Cow-Calf Output Price Hedging Considerations (as of 4/14/15)

- Case of 90 hd @ 550 lbs =
 - Compare alternatives:
 - a) 90 hd on LRP, b) 1 FC Futures Contract (+/- 91 hd per contract), c) 1 FC Put Option Contract or d) Cash
 - OCT FC: \$209.83 & Exp. Basis: \$14.75 (Exp. Cash = \$224.58)
 - LRP Coverage Price: \$211.14 @ \$1.648 premium
 - OCT Put Option @ \$200.00: \$4.875 premium

Cow-Calf Output Price Hedging Considerations (as of 4/14/15)



Broad Risk Points

- Risk is two-sided
 - Price:
 - KS feedlots who hedged near placement did not have “record September 2014” closeouts
 - Would have avoided record losses in Jan. 2009 closeouts...
 - Health:
 - On-farm adverse ADG is bad to producer experiencing...
 - PEDv impact on pork supplies has been good for cattle producers
 - AI impact on trade and domestic meat supplies is bad for cattle prod.
- Generally, absorbing some risk is “necessary”

Wrap-Up

- Broad 2015 Profitability Outlook
 - Cow-calf: Very good (but not 2014)
 - Stocker: Okay, with lots of \$ tied up
 - Feedlot: Struggle, with lots of \$ tied up

Wrap-Up

- Keys to Profitable Herd Expansion
 - Ongoing domestic & global beef demand growth
 - Ongoing production efficiency gains
 - Persistent risk and capital management
 - Improved within industry coordination of effort

Take-Home Summary Points

- Opportunity or Threat? “Same risks” are often viewed differently across people
- Everyone must appreciate:
 - Risks are two-sided
 - Mitigating risk is not free...
 - Your comparative advantage in selecting risks to accept

More information available at:



This presentation will be available in PDF format at:

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

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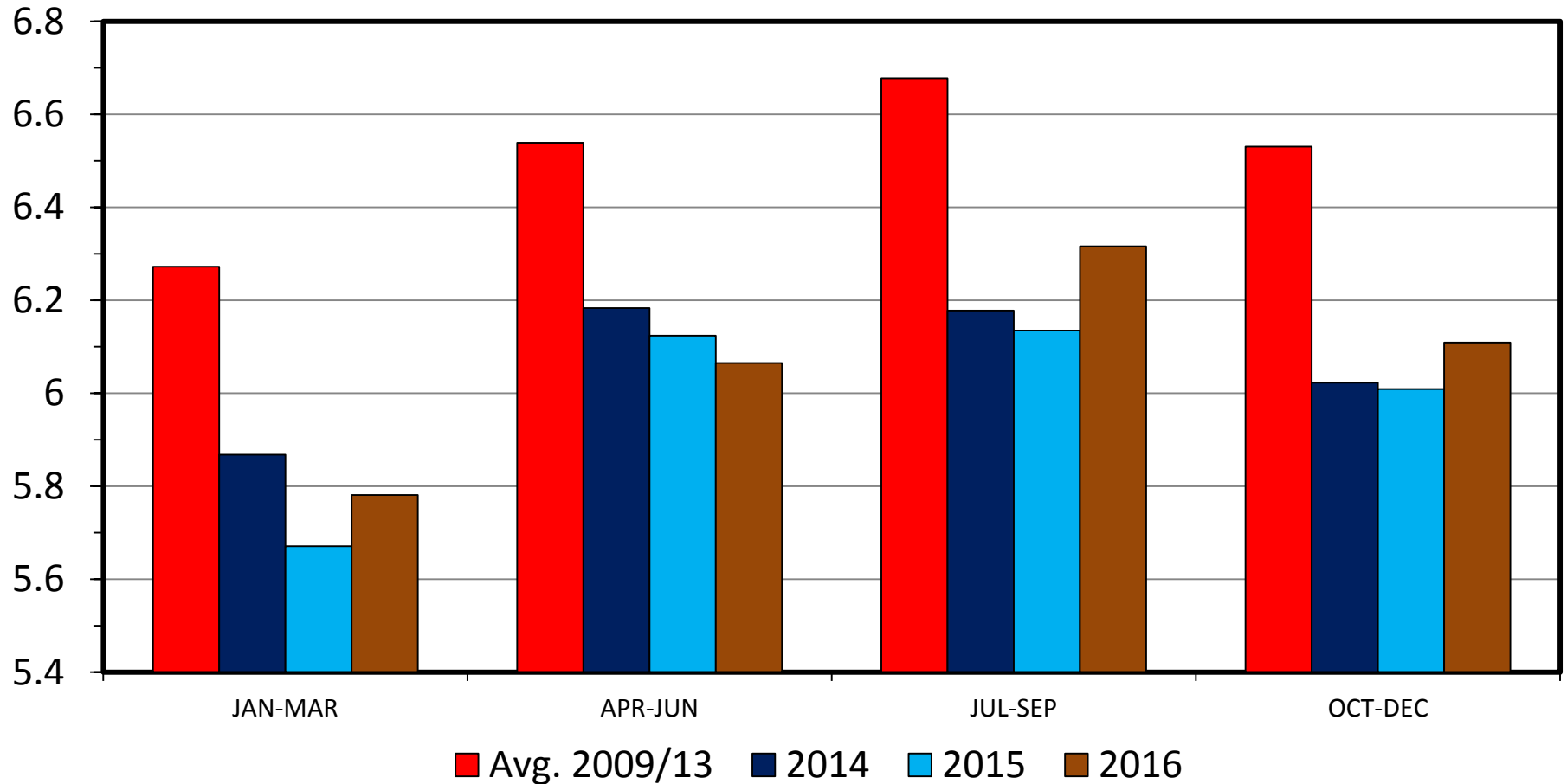
<http://www.AgManager.info/Evaluation/Email.htm>



COMMERCIAL BEEF PRODUCTION

US, Quarterly

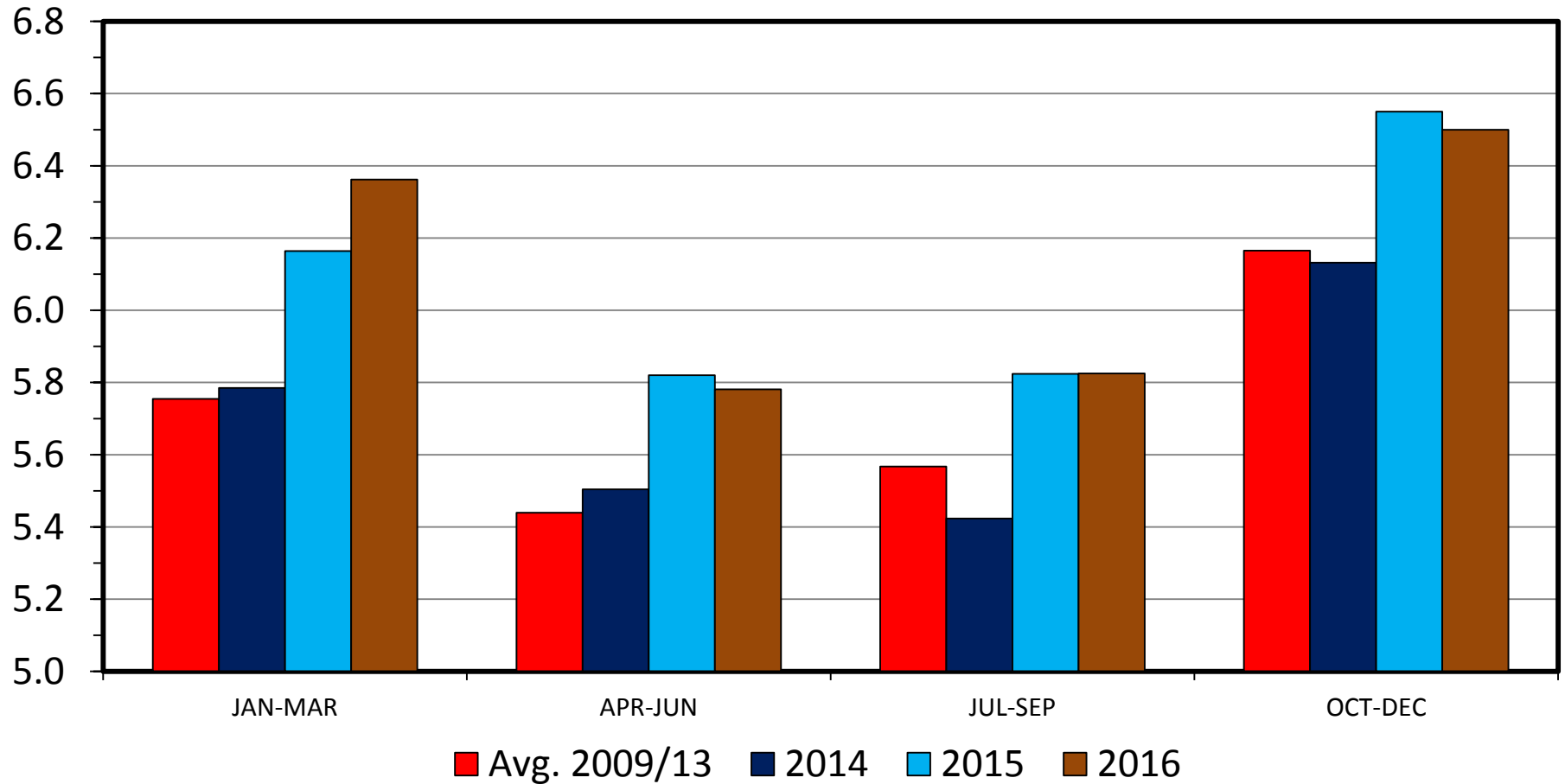
Bil. Pounds



COMMERCIAL PORK PRODUCTION

US, Quarterly

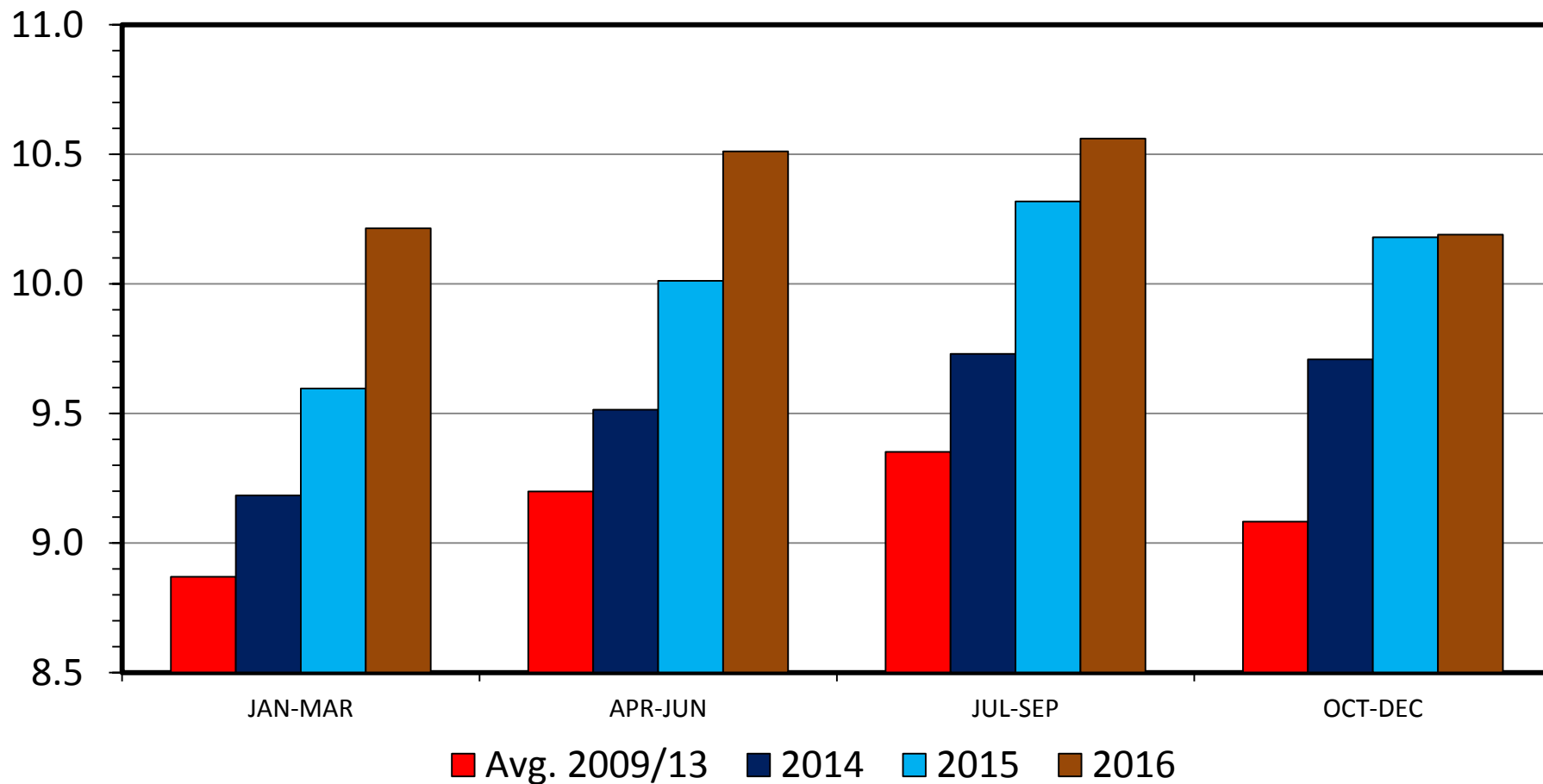
Bil. Pounds



RTC BROILER PRODUCTION

US, Quarterly

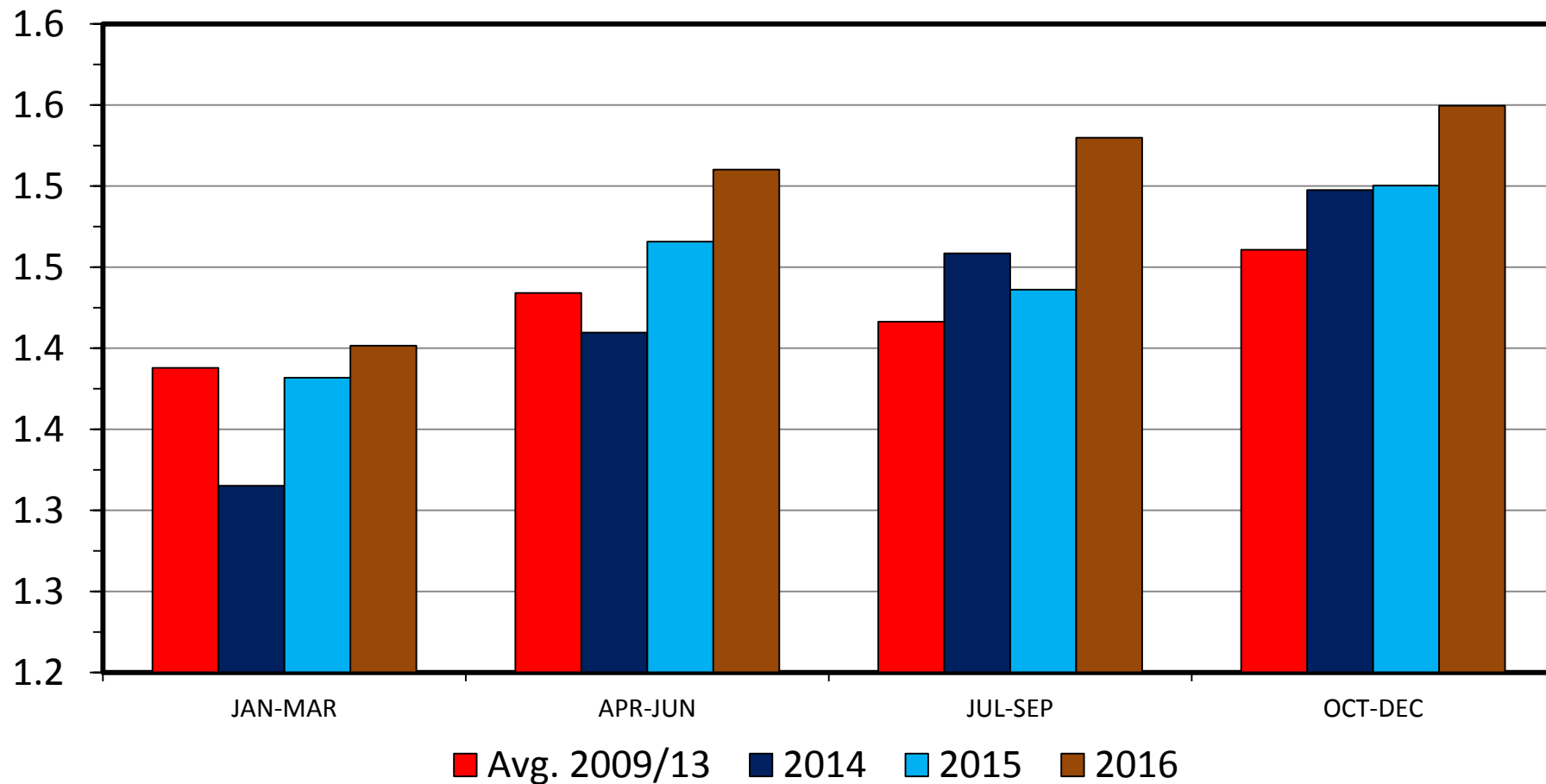
Bil. Pounds



RTC TURKEY PRODUCTION

US, Quarterly

Bil. Pounds



Data Source: USDA-NASS, Compiled & Analysis by LMIC

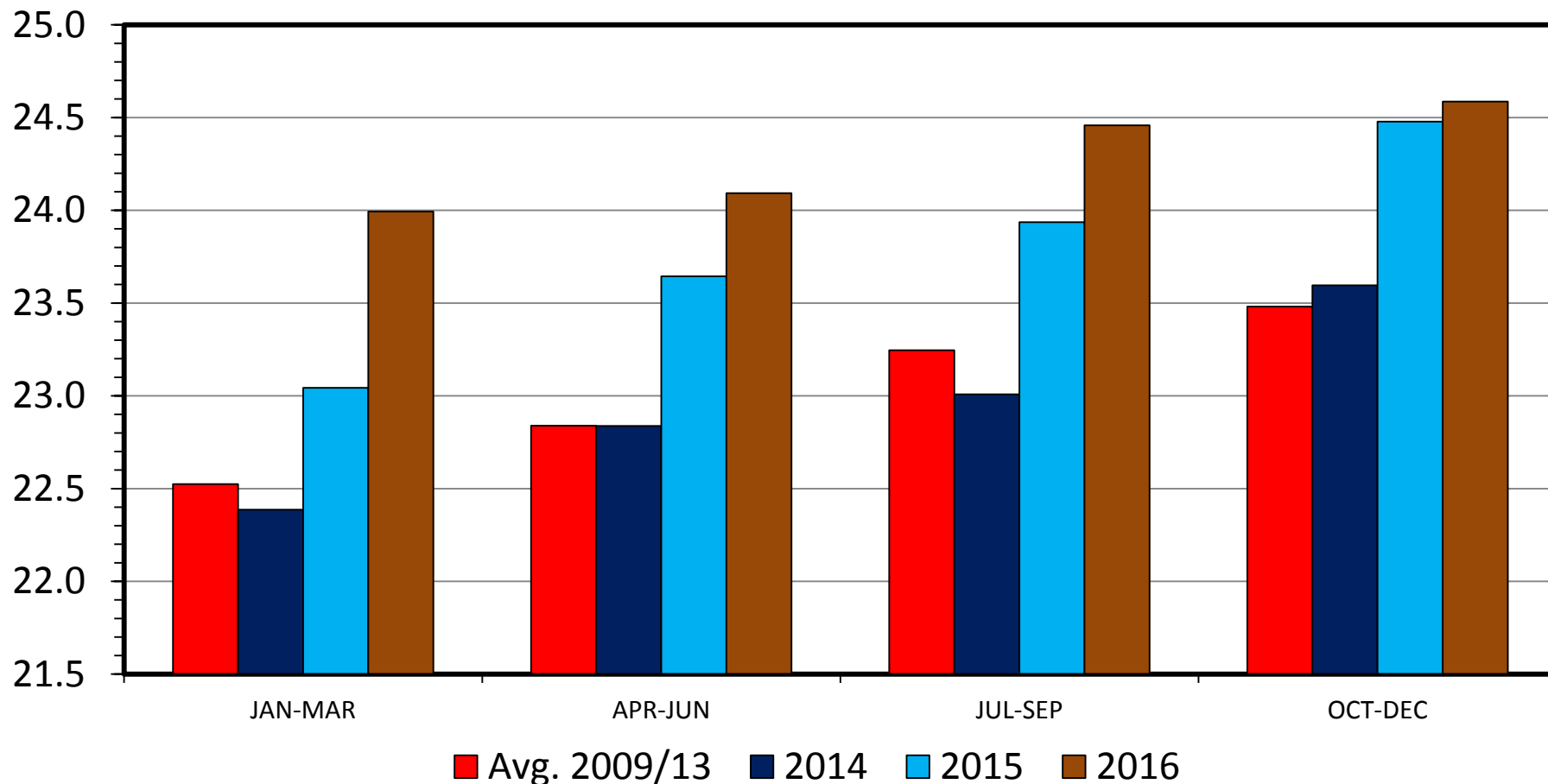
Livestock Marketing Information Center

04/12/15

TOTAL RED MEAT & POULTRY PRODUCTION

US, Quarterly

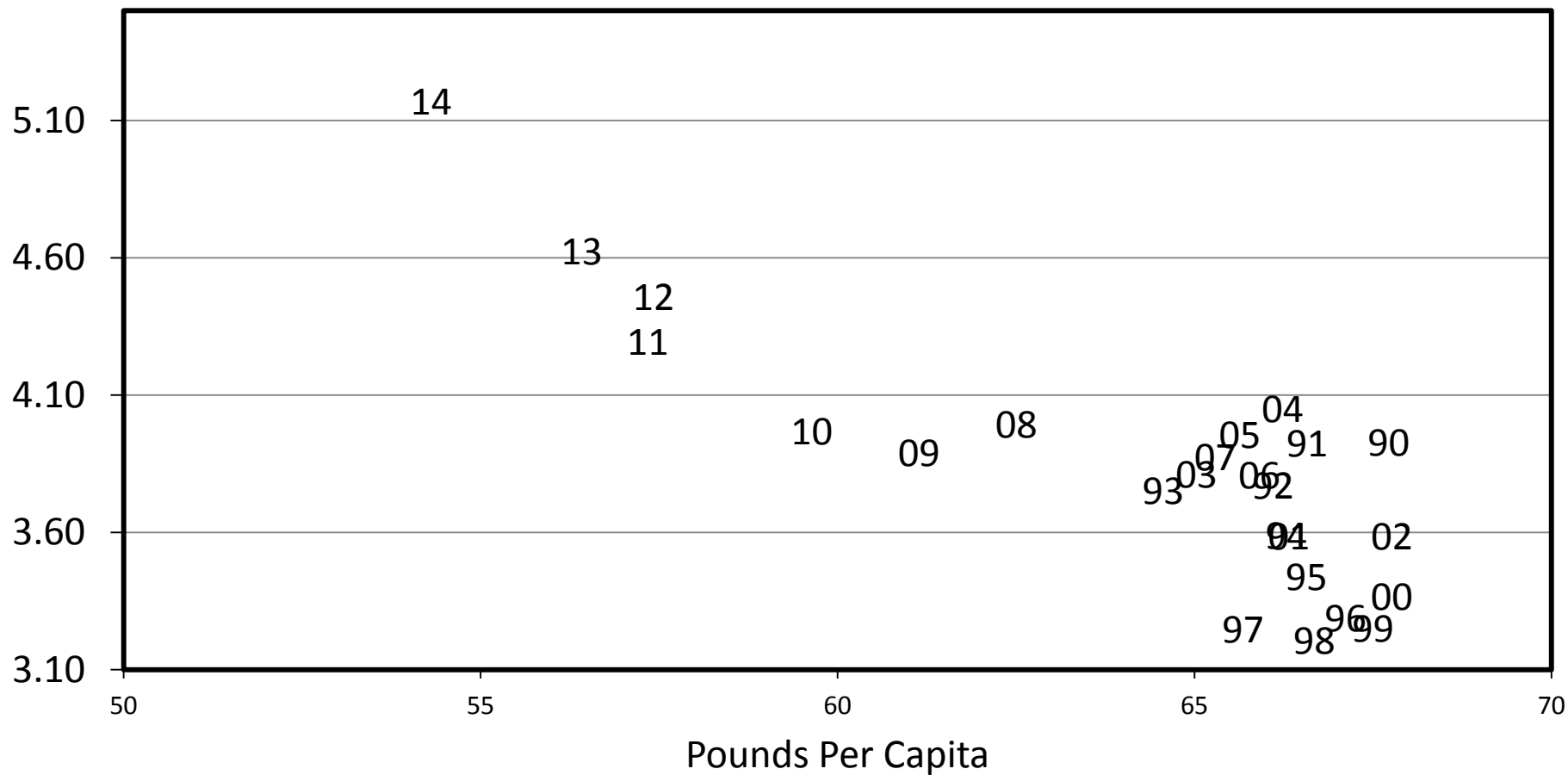
Bil. Pounds



BEEF PRICE-QUANTITY RELATIONSHIP

Annual, Retail Weight, Deflated All Fresh Retail Price

\$ Per Pound



Data Source: Bureau of Economic Analysis & USDA-ERS, Compiled and Analysis by LMIC

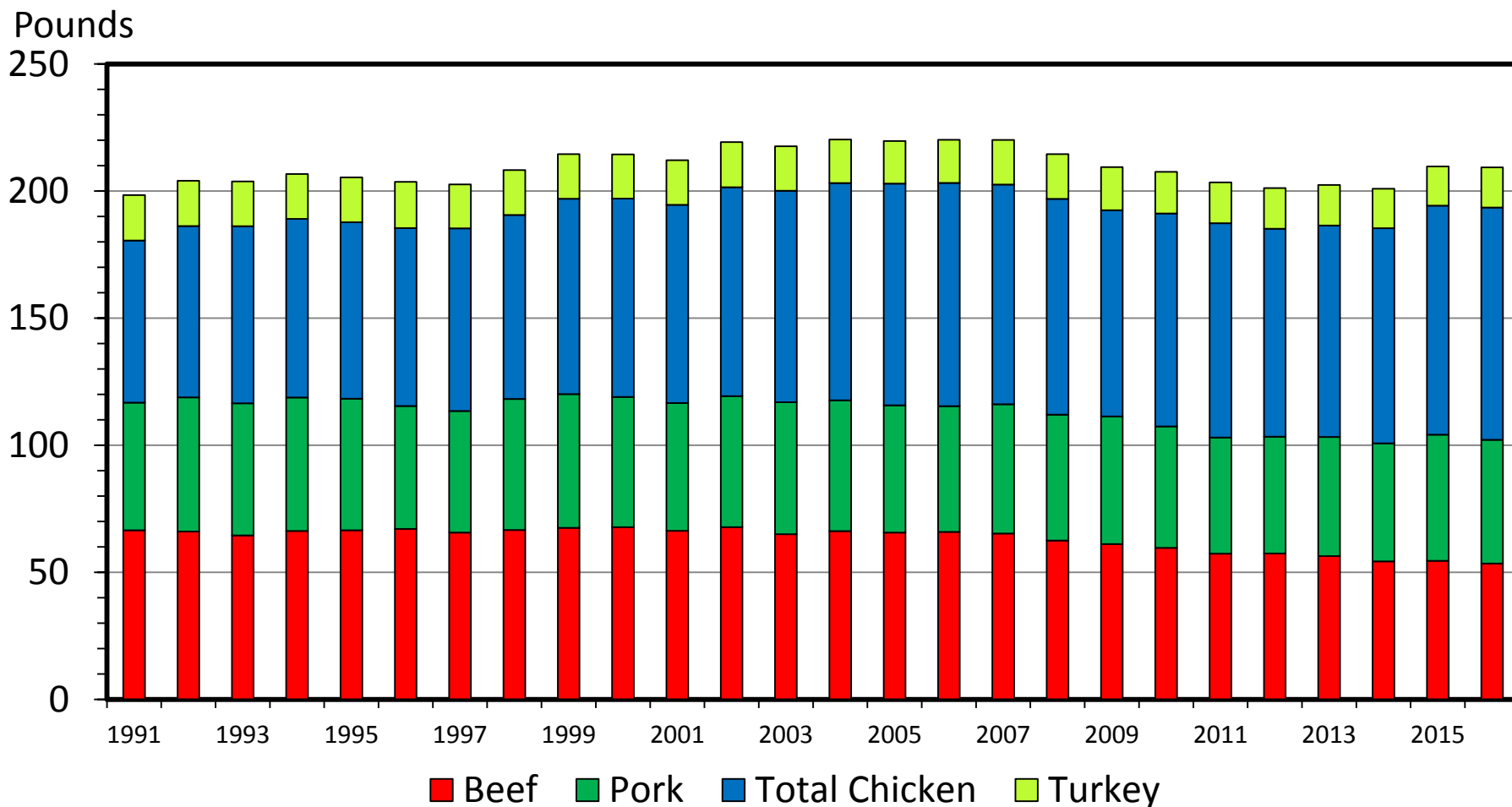
Livestock Marketing Information Center

C-P-65A

03/04/15

US RED MEAT & POULTRY CONSUMPTION

Per Capita, Retail Weight, Annual



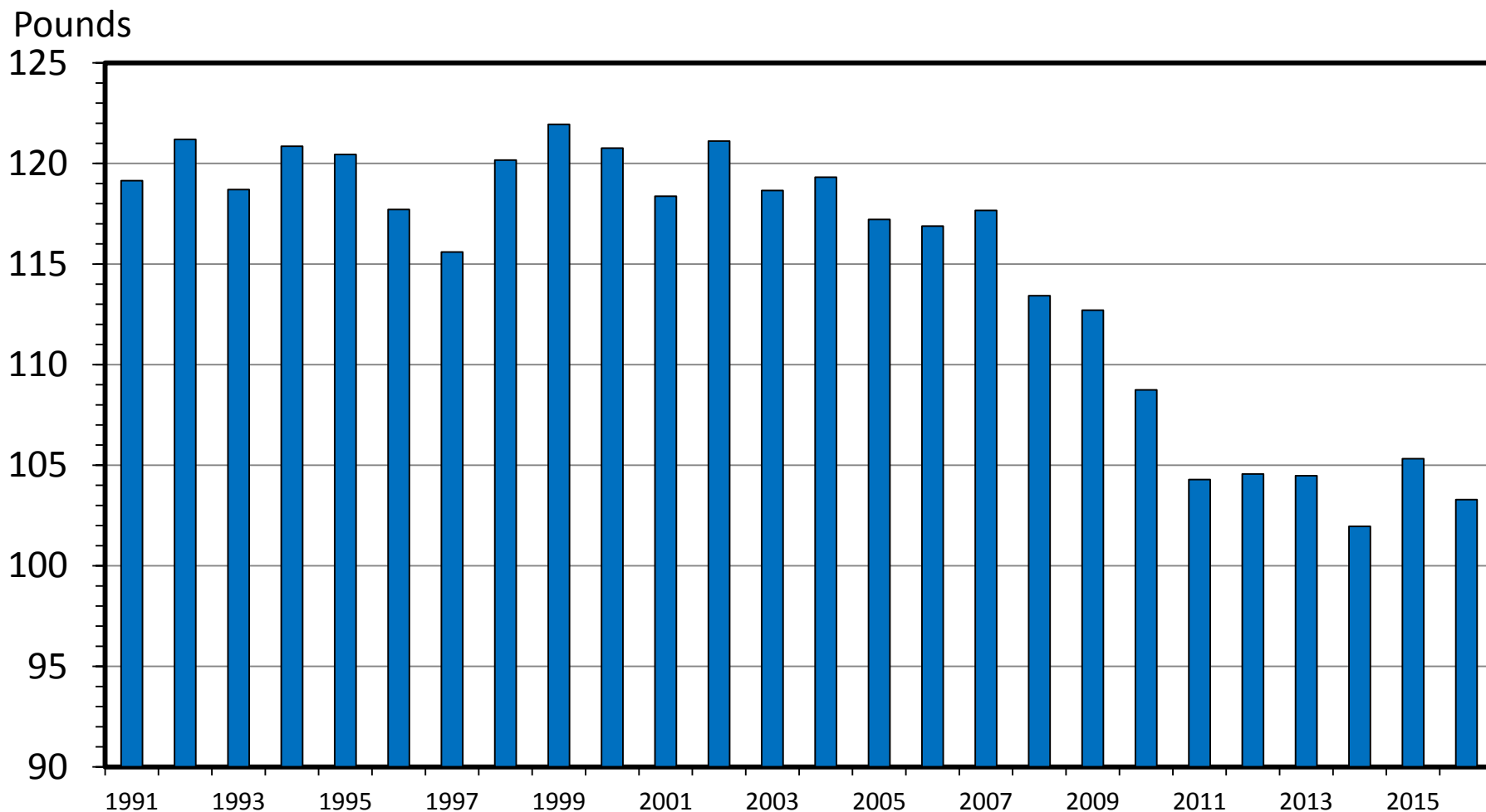
Data Source: USDA-NASS, Compiled & Analysis by LMIC

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M-C-01
03/30/15

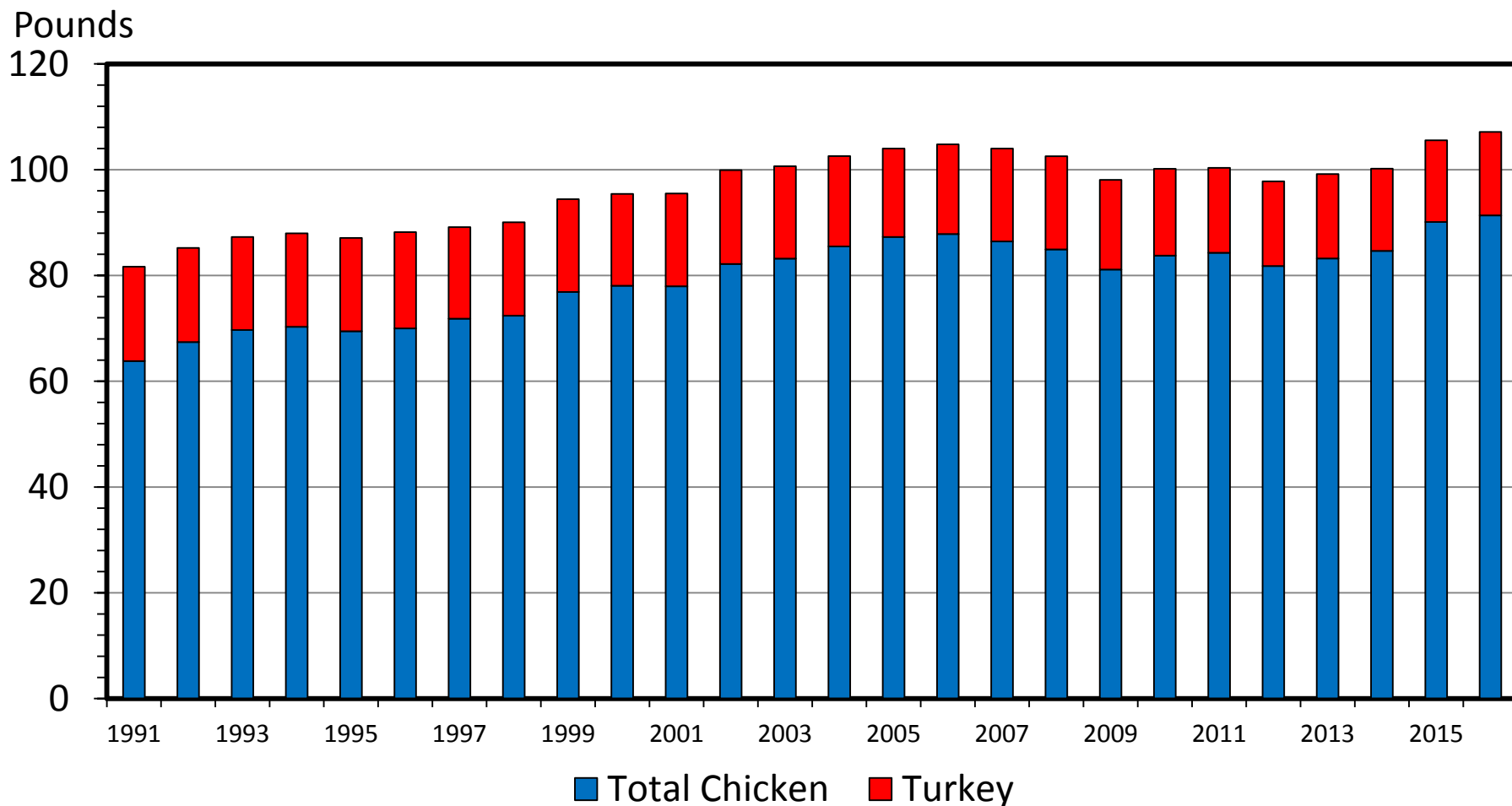
US TOTAL RED MEAT CONSUMPTION

Per Capita, Retail Weight, Annual



US POULTRY CONSUMPTION

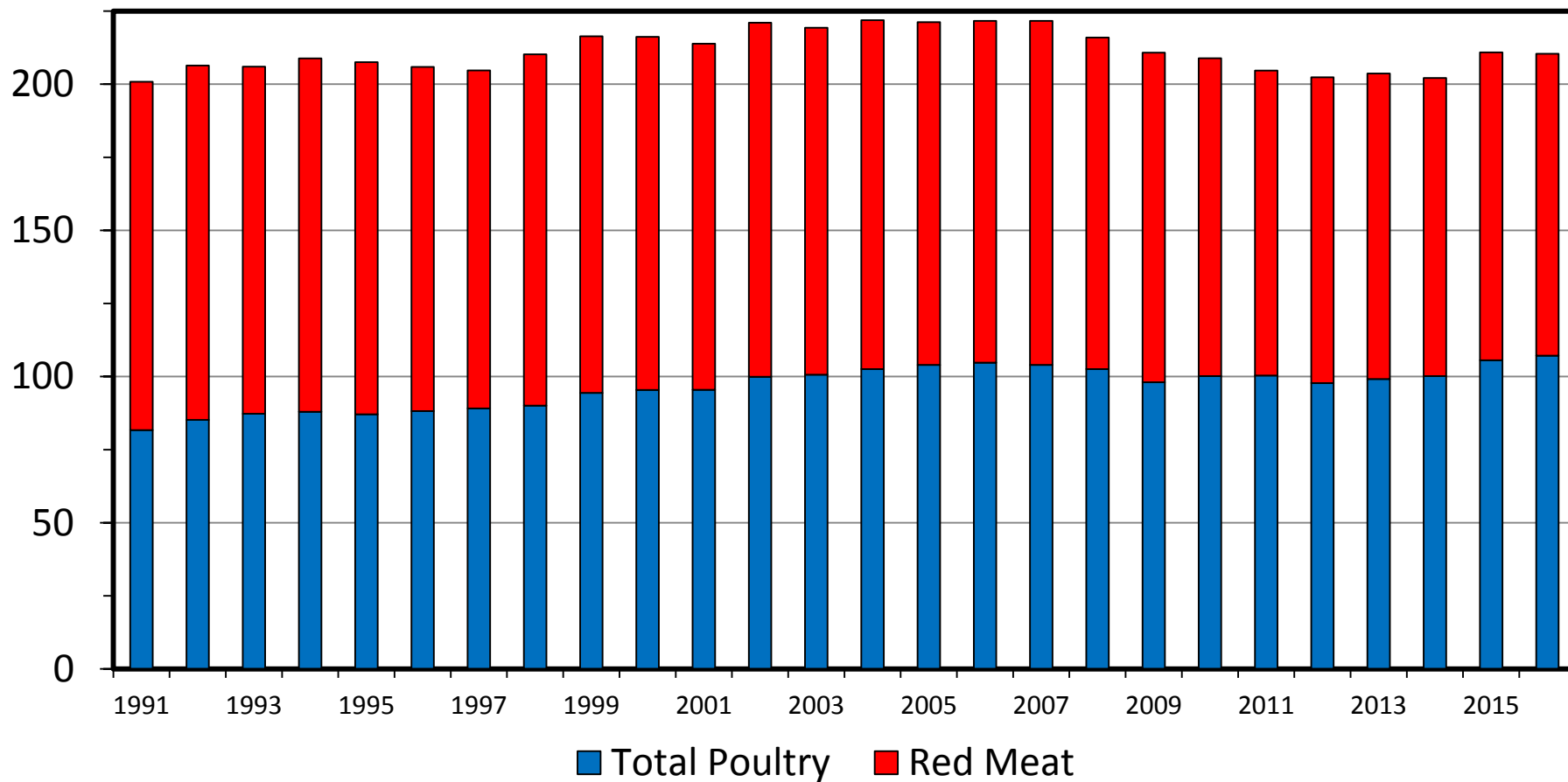
Per Capita, Retail Weight, Annual



US RED MEAT & POULTRY CONSUMPTION

Per Capita, Retail Weight, Annual

Pounds



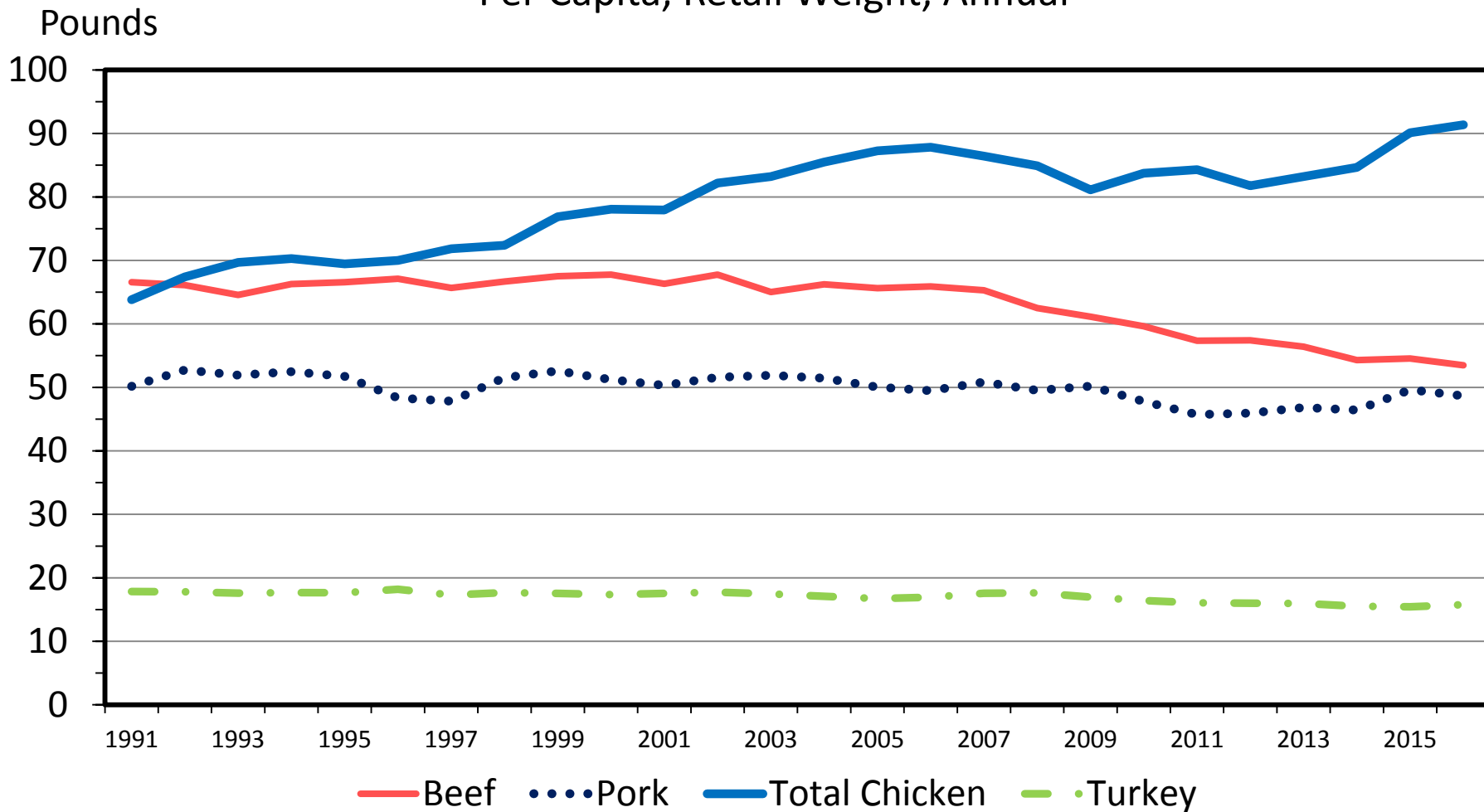
Data Source: USDA-NASS, Compiled & Analysis by LMIC

Livestock Marketing Information Center

M-C-07
03/30/15

US RED MEAT & POULTRY CONSUMPTION

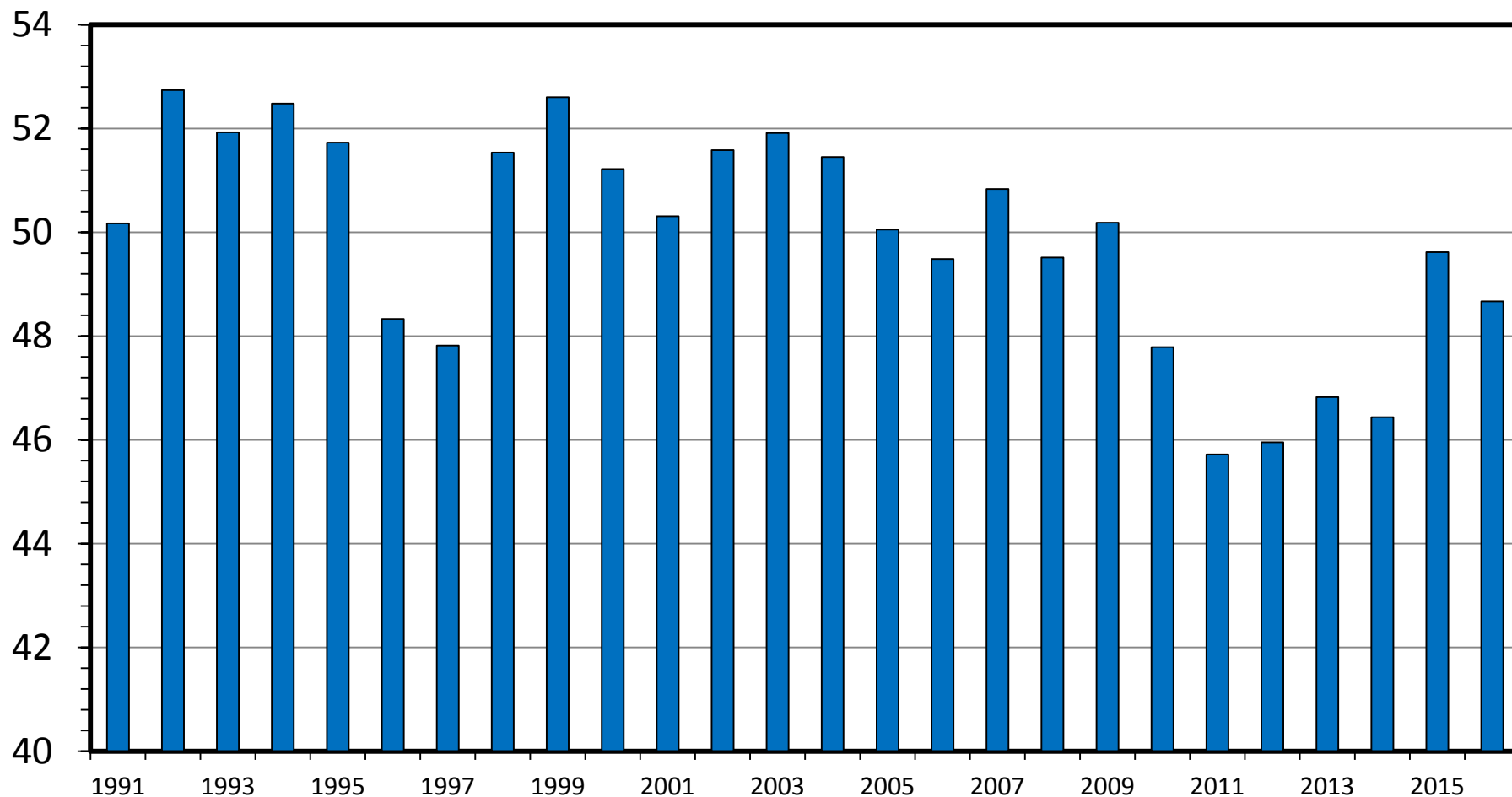
Per Capita, Retail Weight, Annual



US PORK CONSUMPTION

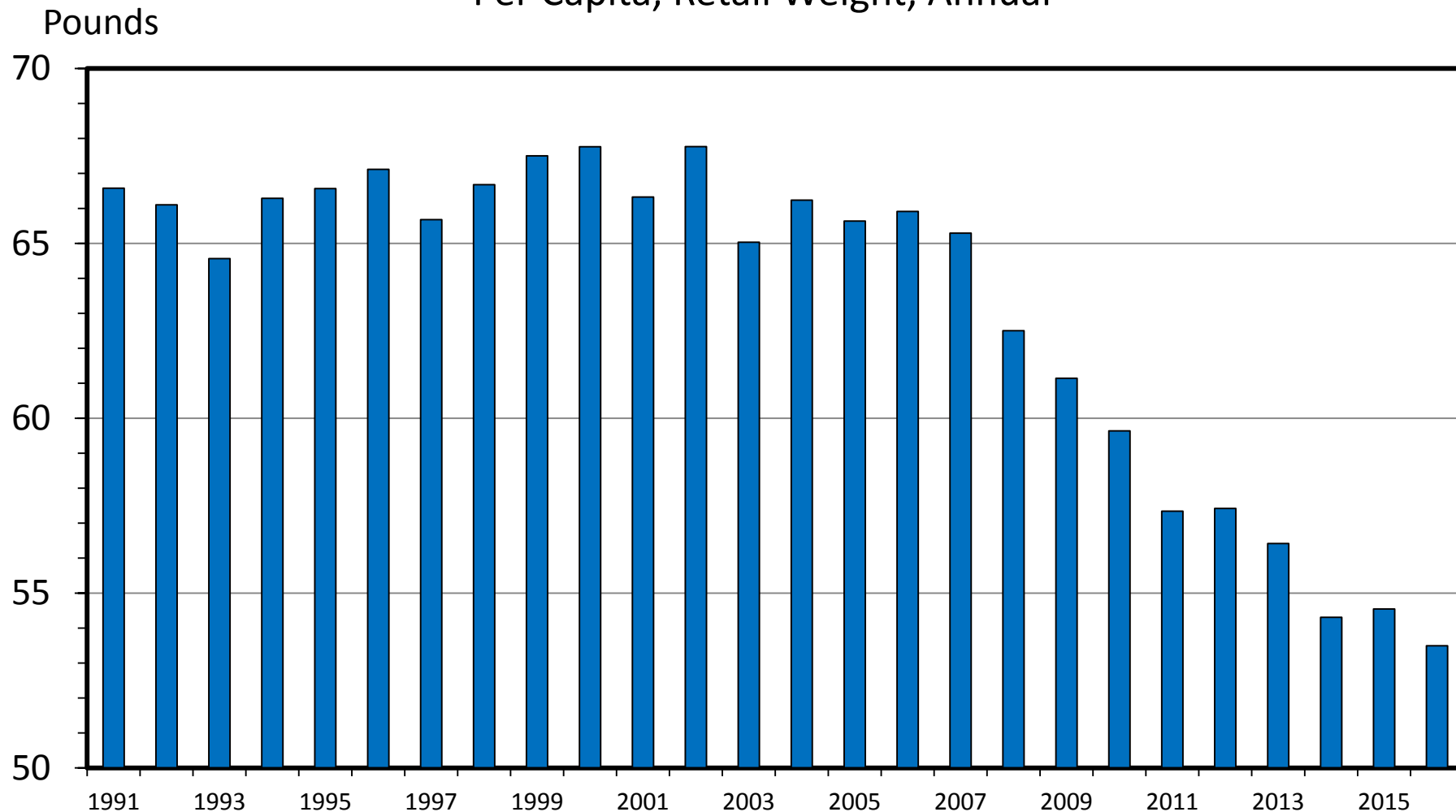
Per Capita, Retail Weight, Annual

Pounds



US BEEF CONSUMPTION

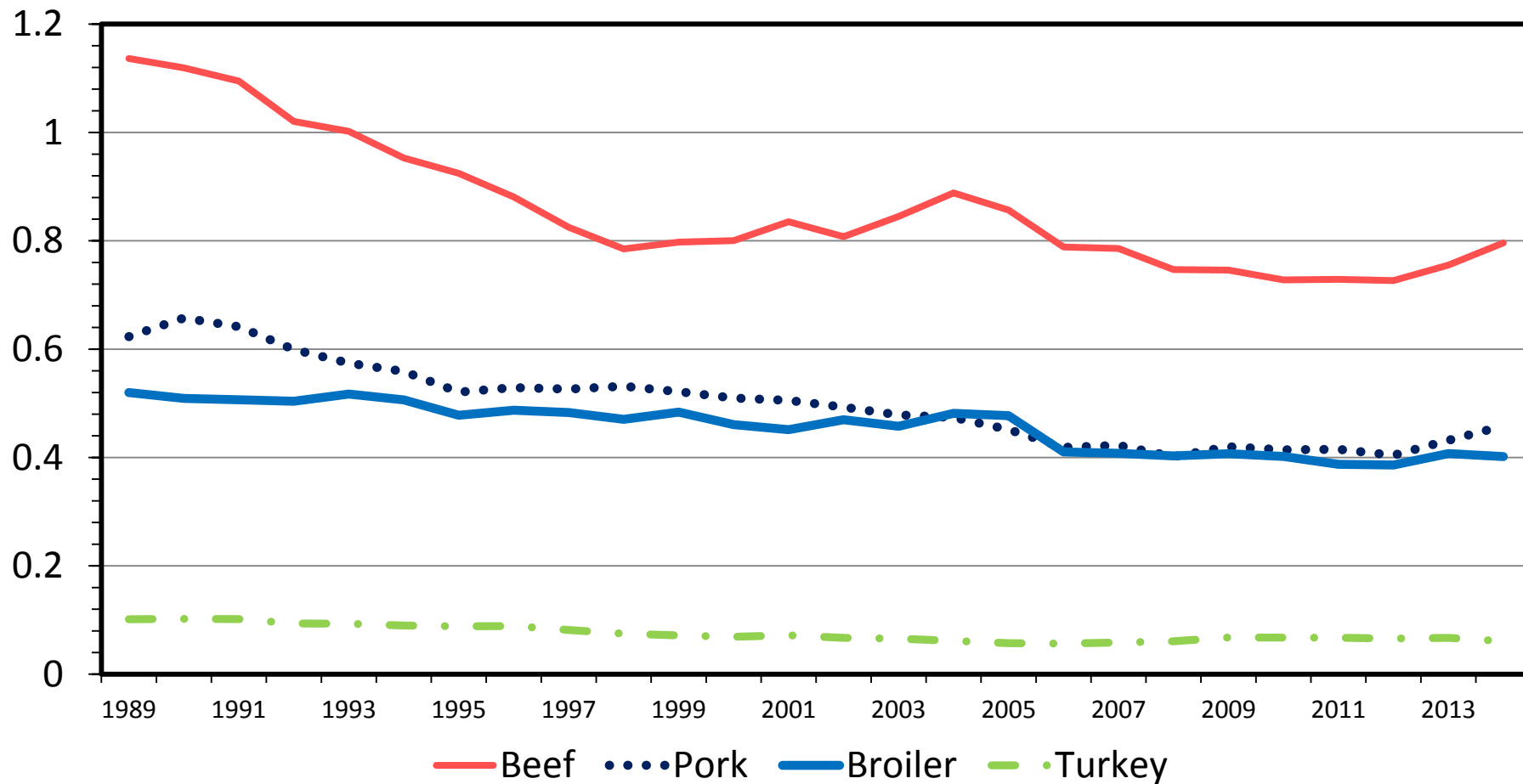
Per Capita, Retail Weight, Annual



US EXPENDITURES FOR MEAT & POULTRY

Percent of Disposable Income

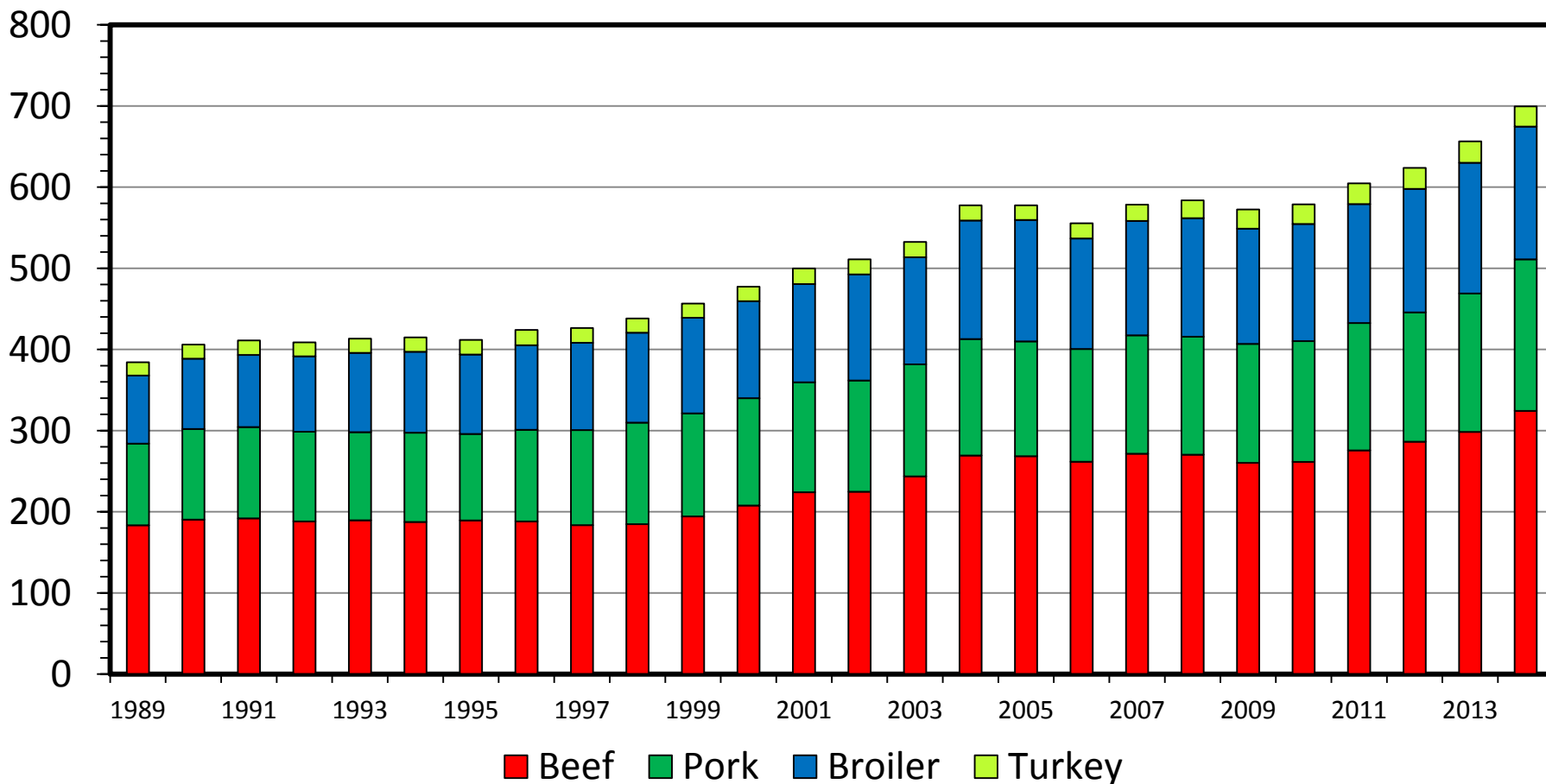
Percent



US EXPENDITURES FOR MEAT & POULTRY

Per Capita, By Type of Meat, Annual

Nominal Dollars



Data Source: Bureau of Economic Analysis & USDA-ERS, Compiled & Analysis by LMIC

Livestock Marketing Information Center

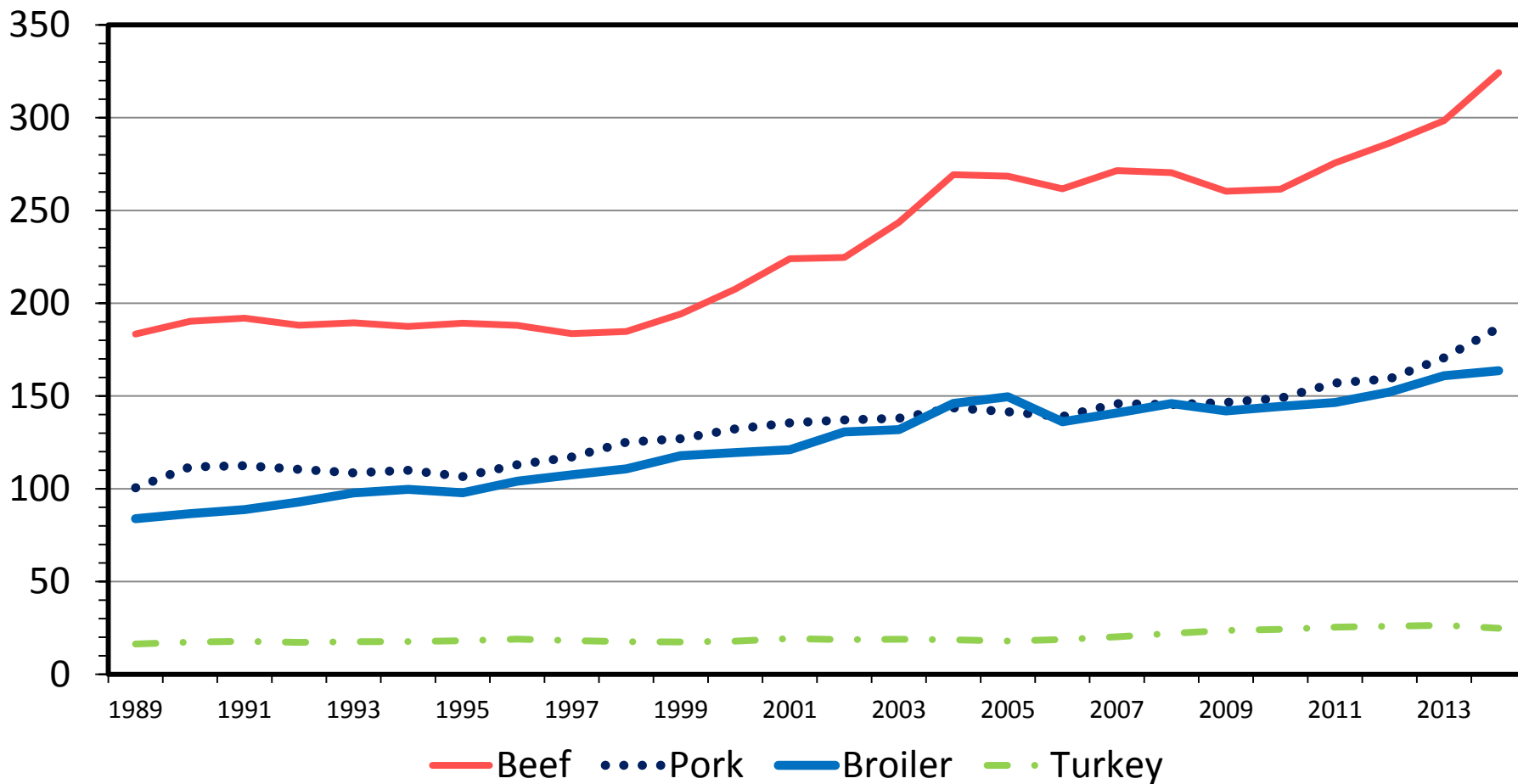
M-C-16A

03/30/15

US EXPENDITURES FOR MEAT & POULTRY

Per Capita, By Type of Meat, Annual

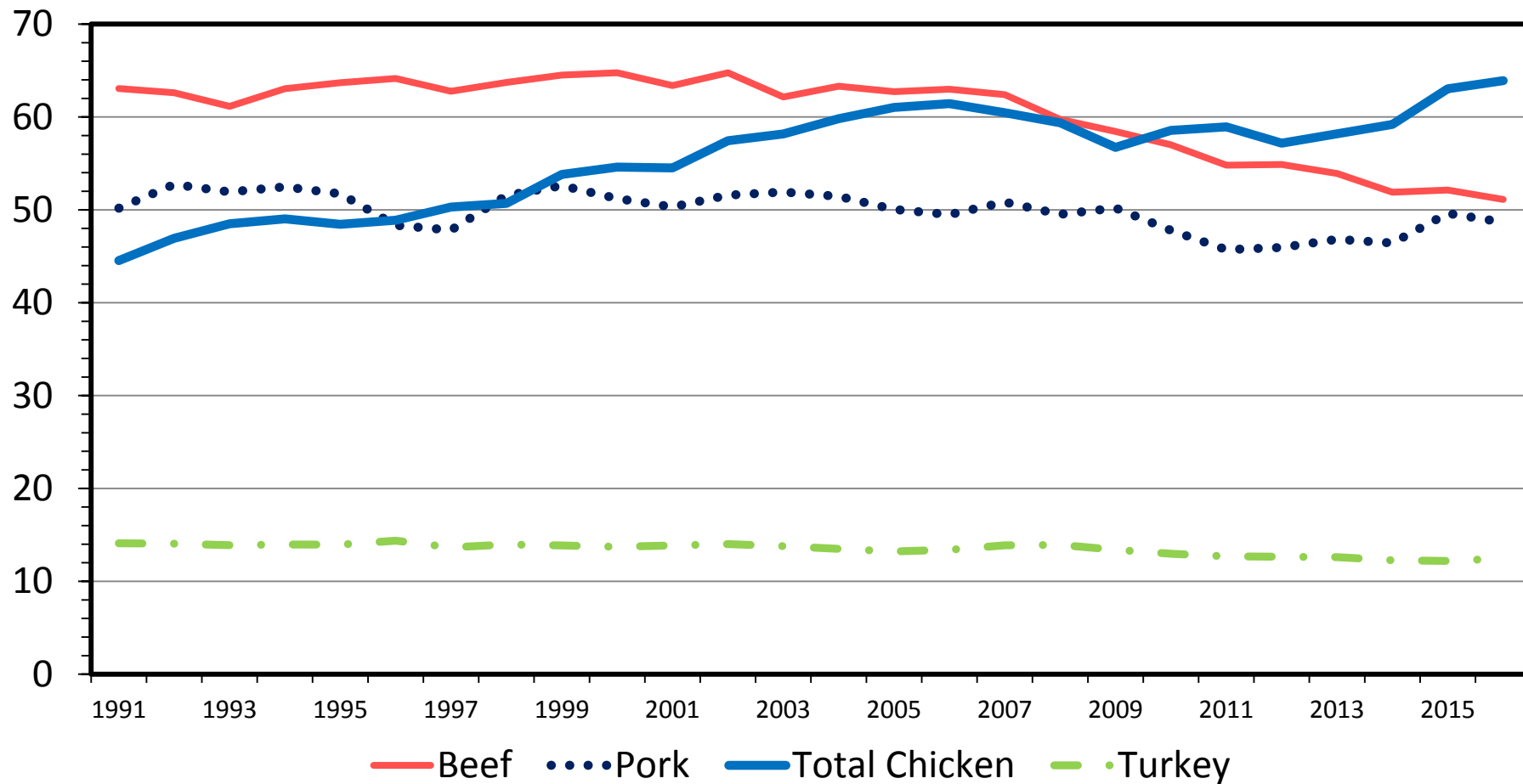
Nominal Dollars



US RED MEAT & POULTRY CONSUMPTION

Per Capita, Boneless Weight, Annual

Pounds



Pending Expansion? – How Fast?, How Large?, How Long?...

TOTAL CATTLE INVENTORY BY CYCLE

U.S., January 1

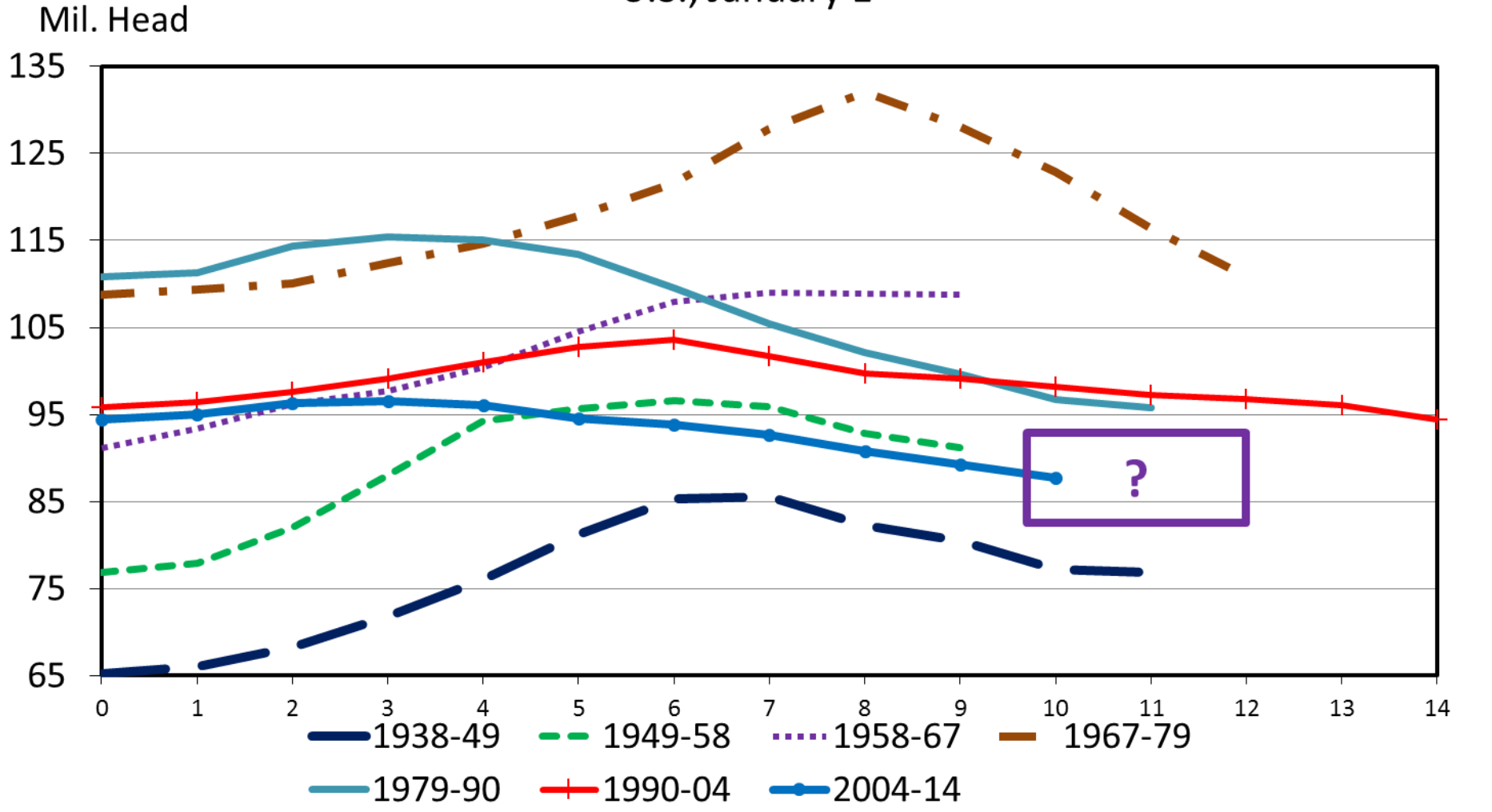
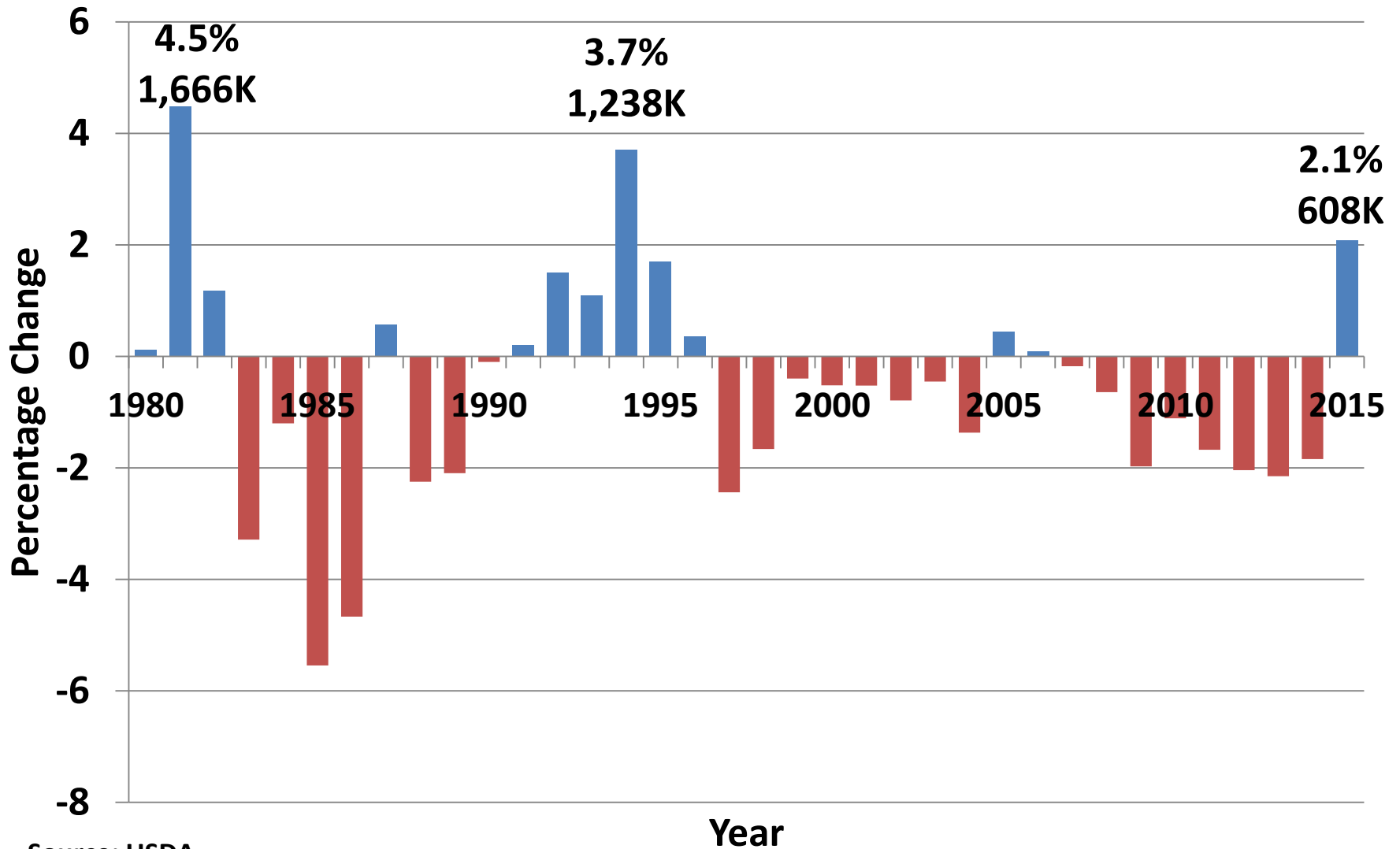


Table 1. Beef Cows that Calved (1,000 hd)								
<i>State / Region</i>	<i>1996</i>	<i>2006</i>	<i>2010</i>	<i>2015</i>	<i>1996 (% of US)</i>	<i>2006 (% of US)</i>	<i>2010 (% of US)</i>	<i>2015 (% of US)</i>
TX	5,900	5,350	5,140	4,180	16.7%	16.4%	16.3%	14.1%
OK	1,986	2,045	2,073	1,900	5.6%	6.3%	6.6%	6.4%
MO	2,185	2,166	1,968	1,881	6.2%	6.6%	6.3%	6.3%
NE	1,930	1,930	1,781	1,786	5.5%	5.9%	5.7%	6.0%
SD	1,705	1,719	1,637	1,632	4.8%	5.3%	5.2%	5.5%
MT	1,570	1,401	1,465	1,506	4.4%	4.3%	4.7%	5.1%
KS	1,497	1,550	1,434	1,477	4.2%	4.7%	4.6%	5.0%
KY	1,200	1,118	1,070	1,007	3.4%	3.4%	3.4%	3.4%
IA	1,055	1,000	895	920	3.0%	3.1%	2.8%	3.1%
FL	1,115	916	958	916	3.2%	2.8%	3.0%	3.1%
US	35,319	32,703	31,440	29,693				
Great Plains	9,301	8,936	8,594	8,744	26.3%	27.3%	27.3%	29.4%
Southern Plains	7,886	7,395	7,213	6,080	22.3%	22.6%	22.9%	20.5%
Cornbelt	5,084	4,877	4,497	4,395	14.4%	14.9%	14.3%	14.8%
Northeast	372	332	343	354	1.1%	1.0%	1.1%	1.2%
Southeast	8,868	7,787	7,560	7,119	25.1%	23.8%	24.0%	24.0%
West	3,808	3,376	3,233	3,001	10.8%	10.3%	10.3%	10.1%

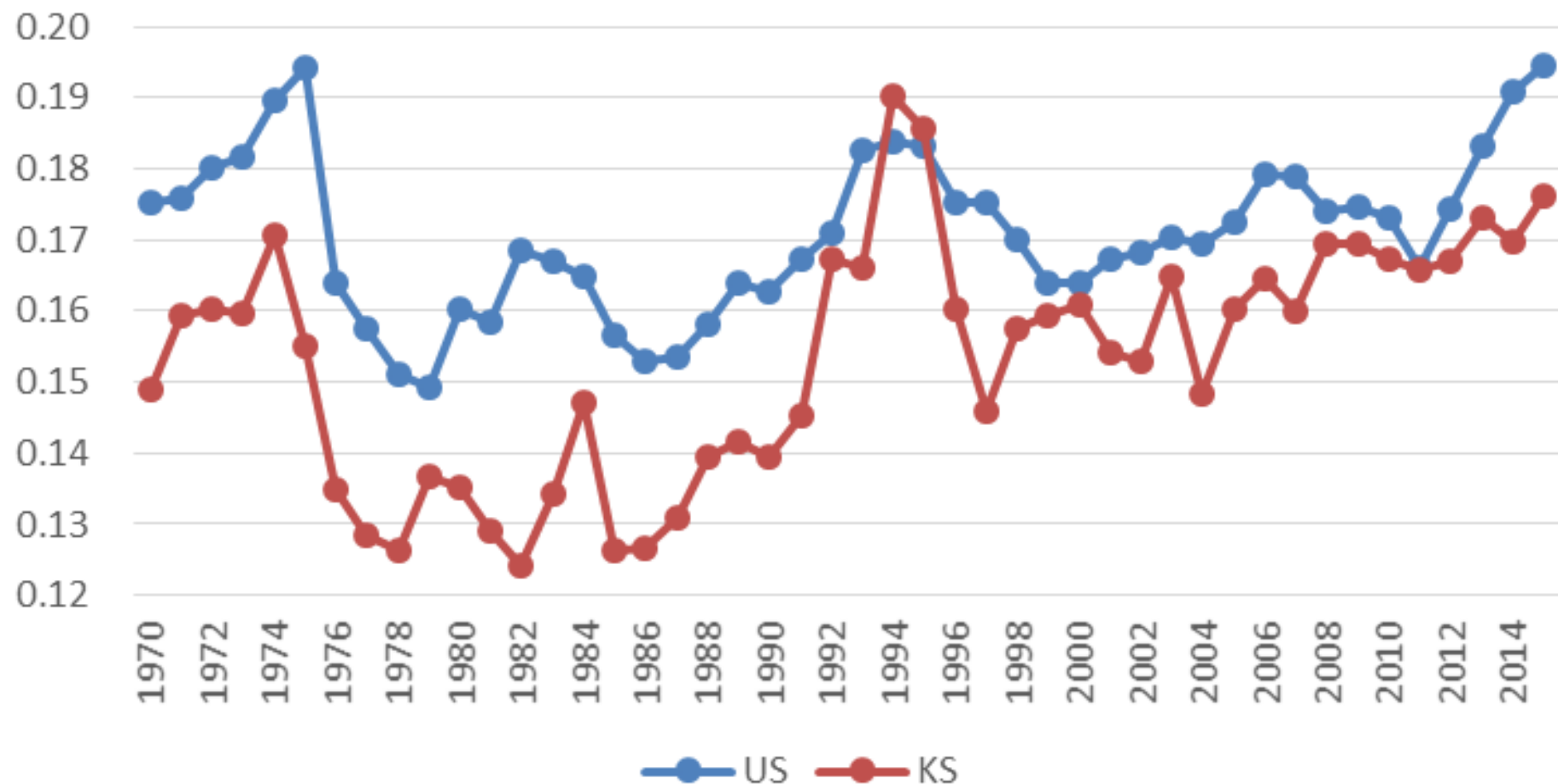
Table 2. Heifers for Beef Cow Replacement (1,000 hd)							
<i>State / Region</i>	<i>1996</i>	<i>2006</i>	<i>2010</i>	<i>2015</i>	<i>1996 (% of US)</i>	<i>2006 (% of US)</i>	<i>2010 (% of US)</i>
TX	880	820	760	710	14.2%	14.0%	14.0%
MT	330	445	340	425	5.3%	7.6%	6.2%
OK	390	430	405	405	6.3%	7.3%	7.4%
NE	285	295	320	390	4.6%	5.0%	5.9%
SD	270	295	290	380	4.4%	5.0%	5.3%
MO	345	340	280	310	5.6%	5.8%	5.1%
KS	240	255	240	260	3.9%	4.3%	4.4%
WY	150	180	145	183	2.4%	3.1%	2.7%
IA	150	140	140	170	2.4%	2.4%	2.6%
ND	175	157	165	164	2.8%	2.7%	3.0%
US	6,189	5,864	5,443	5,777			
Great Plains	1,610	1,742	1,620	1,962	26.0%	29.7%	29.8%
Southern Plains	1,270	1,250	1,165	1,115	20.5%	21.3%	21.4%
Cornbelt	847	856	762	822	13.7%	14.6%	14.0%
Northeast	107	94	99	114	1.7%	1.6%	1.8%
Southeast	1,598	1,288	1,213	1,133	25.8%	22.0%	22.3%
West	757	633	584	632	12.2%	10.8%	10.7%

US Beef Cow Inventory Year-over-Year Change, 1980- 2015



Source: USDA

Heifers Retained as % of Beef Cow Inv.



Heifers Retained as % of Beef Cow Inv.

