2015 K-State Cattle Feeders Roundtable
Dec. 8, 2015 Garden City, KS

Beef Cattle Market Outlook

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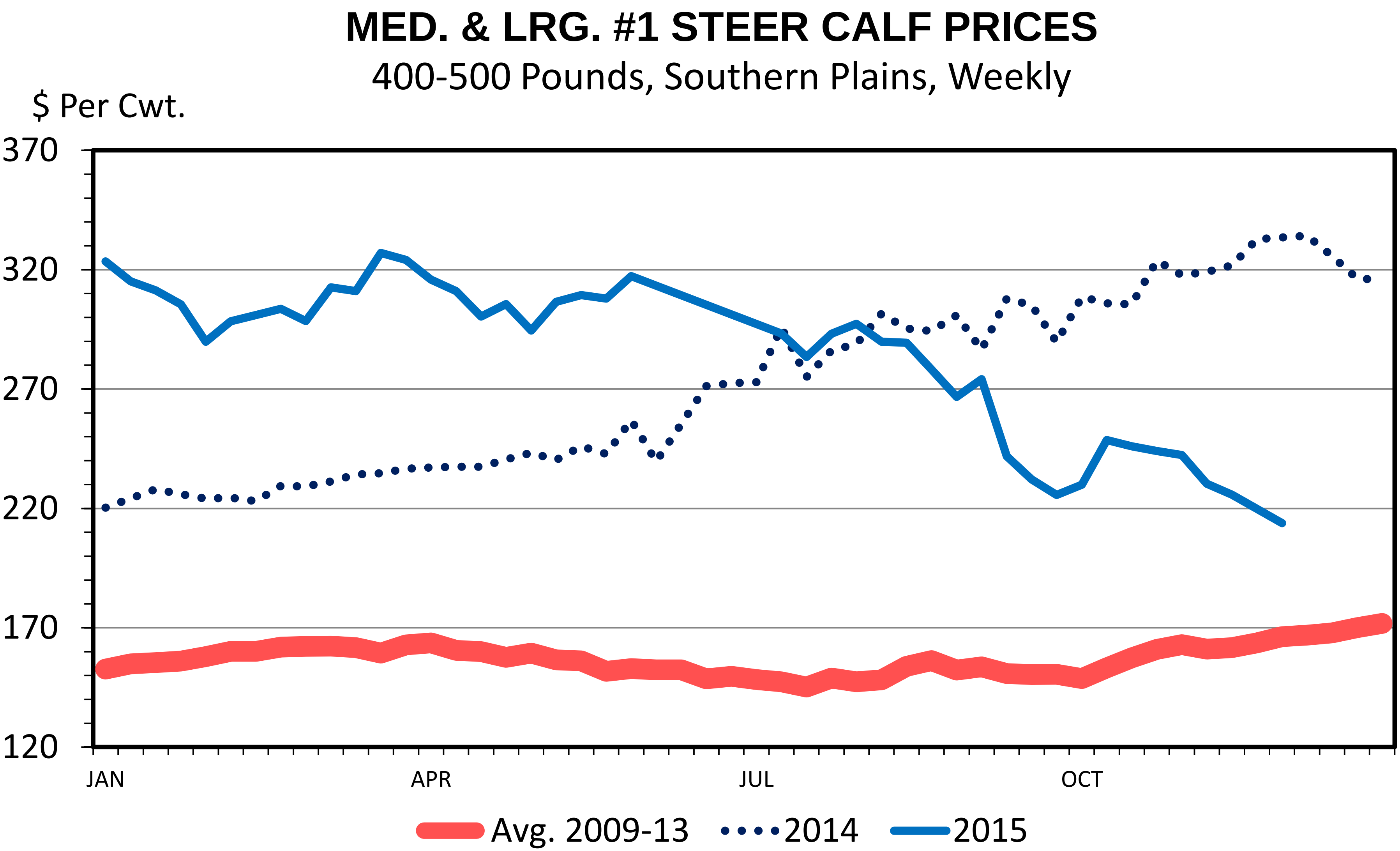
Kansas State Research & Extension
www.agmanager.info

Introduction

Why was 2014 a “record year” for cattle prices?

Overarching Beef Industry Economic Outlook

- Supplies
  - While historically tight, herd expansion well underway
- Demand
  - Been positive since 2010; recent concerns persist



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

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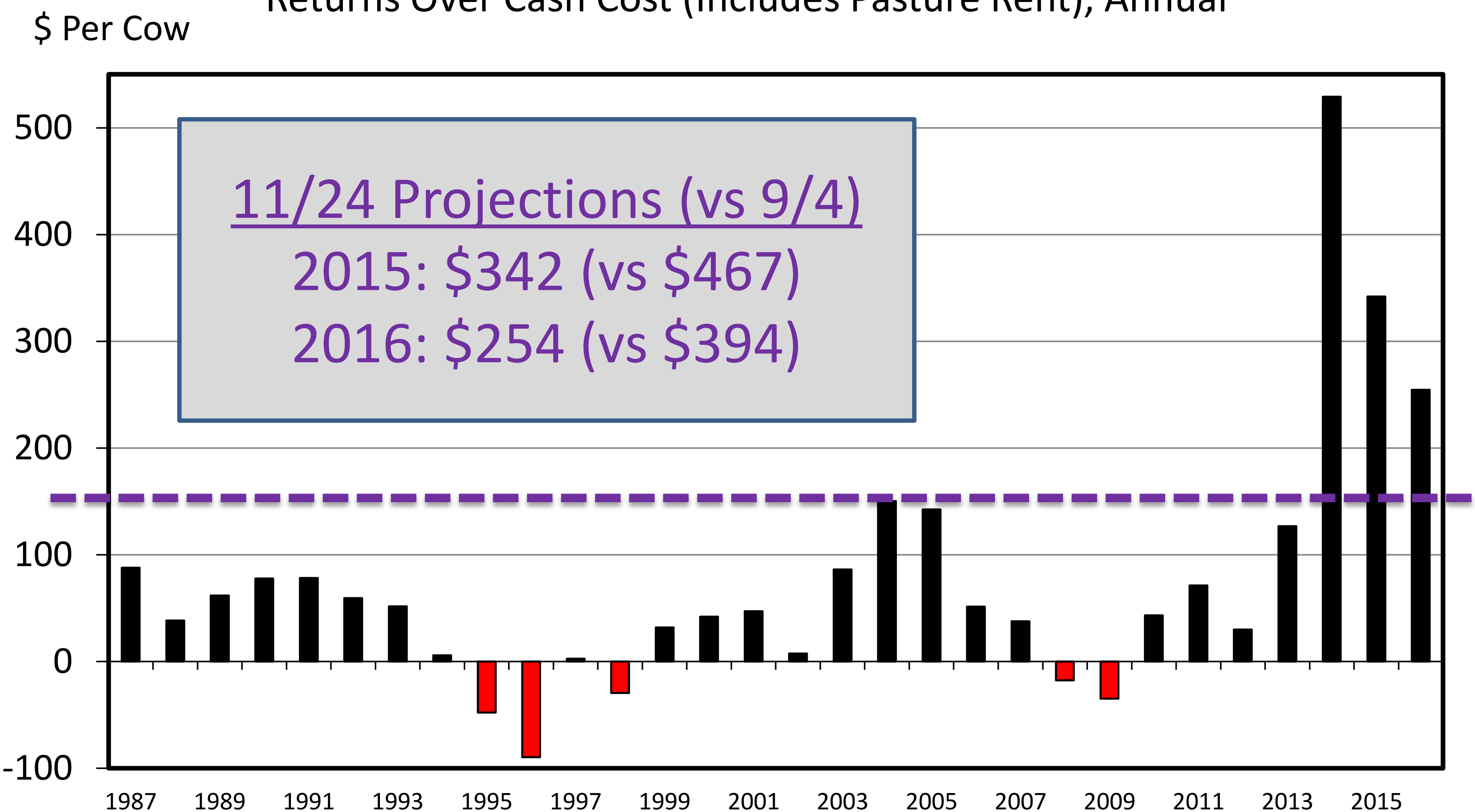
C-P-49A
12/07/15

ESTIMATED AVERAGE COW CALF RETURNS

Returns Over Cash Cost (Includes Pasture Rent), Annual



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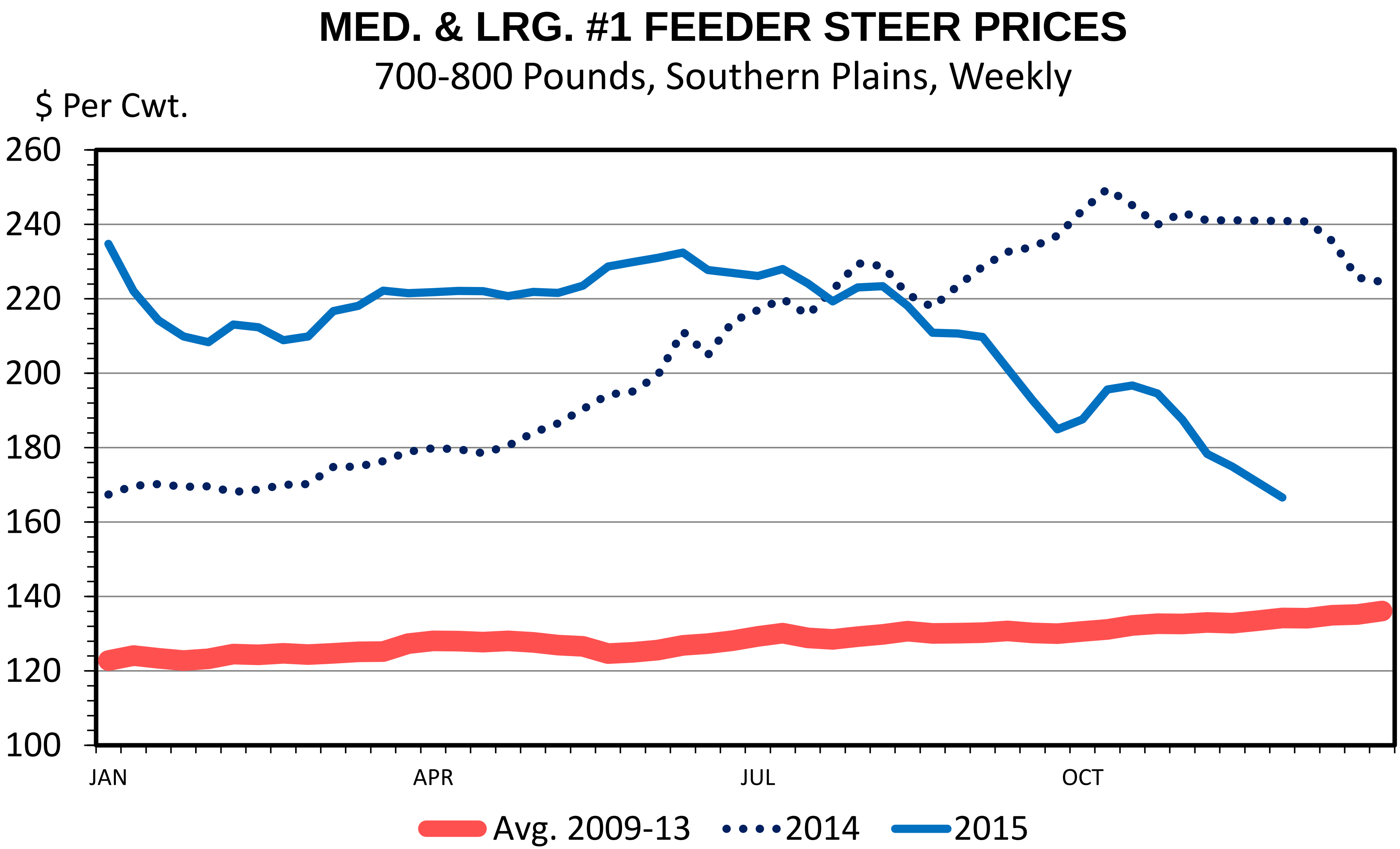

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Economic Outlook Overview: Stockers

http://www.beefbasis.com/ForecastingTools/ValueofGain/tabid/1132/Default.aspx

- Dodge City, KS 12/8/15 situation:
  - Buy 575 lb steer on 12/15/15 ($165)
  - Sell 800 lb steer on 04/01/16 ($147) {2.06 ADG}
    - <u>VOG: $100/cwt</u>

    - IF COG $80/cwt THEN Exp. Profit = +/- $45/hd

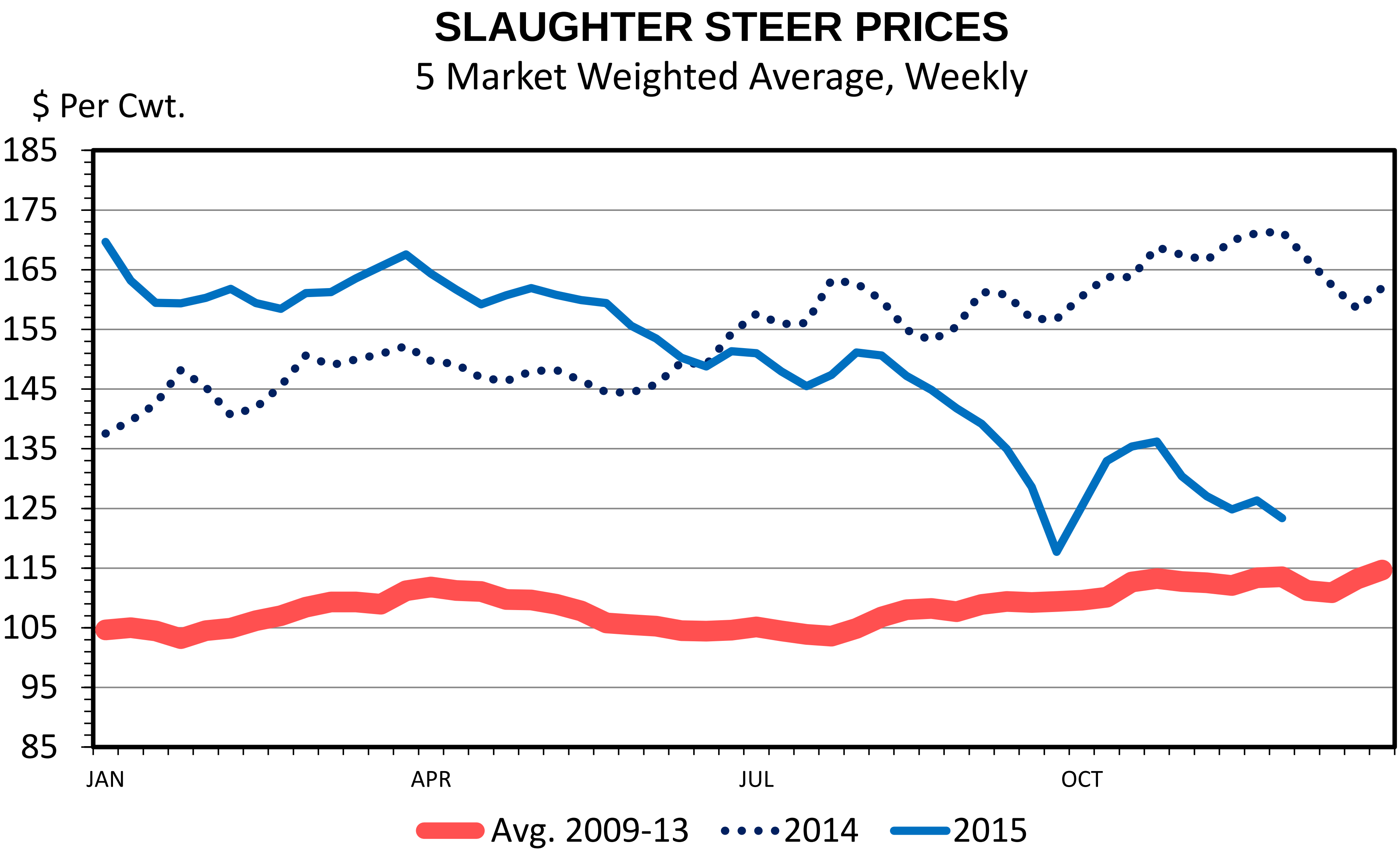
Economic Outlook Overview: Stockers

http://www.beefbasis.com/ForecastingTools/ValueofGain/tabid/1132/Default.aspx

- Dodge City, KS 12/8/15 situation:
  - Buy 575 lb steer on 12/15/15 ($165)
  - Sell 700 lb steer on 04/01/16 ($156) {1.15 ADG}
    - VOG: $114/cwt
    - IF COG $75/cwt THEN Exp. Profit = +/- $49/hd

Economic Outlook Overview: Feedlots

- 2015 cash returns continue to worsen
  - “Extra heavy” situation + demand concerns
- Structural concerns persist:
  - Excess capacity, Heifer Retention, Plant Closures, MCOOL, Cash Trade & Price Discovery…



Data Source: USDA-AMS

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Feedlots, Heavy-Weights in Aug-Oct 15’

Jan 10’-July 15’

- 5 Mkt: 1,366 lbs; $126.22
- TX/OK/NM:1,271 lbs;$125.55
- KS: 1,337 lbs; $126.02
- NE: 1,407 lbs; $126.45
- CO: 1,372 lbs; $126.74
- IA/MN: 1,411 lbs; $126.11
  - **$1.19/cwt range**

Aug 15’-Oct 15’

- 5 Mkt: 1,468 lbs; $138.23
- TX/OK/NM:1,356 lbs;$138.99
- KS: 1,399 lbs; $139.18
- NE: 1,471 lbs; $138.77
- CO: 1,444 lbs; $139.79
- IA/MN: 1,499 lbs; **$136.83**
  - **$2.96/cwt range**

Feedlots, Heavy-Weights in Aug-Oct 15’
(Vol. Mkt Share of 5 Mkt Avg - Negotiated)

Jan 10’-July 15’

- 5 Mkt: 1,366 lbs; $126.22
- TX/OK/NM:1,271 lbs;$125.55
  - (17%)
- KS: 1,337 lbs; $126.02
  - (33%)
- NE: 1,407 lbs; $126.45
  - (25%)
- CO: 1,372 lbs; $126.74
  - (6%)
- IA/MN: 1,411 lbs; $126.11
  - (19%)

Aug 15’-Oct 15’

- 5 Mkt: 1,468 lbs; $138.23
- TX/OK/NM:1,356 lbs; $138.99
  - (4%)
- KS: 1,399 lbs; $139.18
  - (15%)
- NE: 1,471 lbs; $138.77
  - (36%)
- CO: 1,444 lbs; $139.79
  - (5%)
- IA/MN: 1,499 lbs; $136.83
  - ***(41%)***

Historical and Projected Kansas Feedlot Net Returns
(as of 11/11/15')

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

Representative Barometer for Trends in Profitability

Historical and Projected Kansas Feedlot Net Returns
(as of 11/11/15')

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

Sept. 15': -$357/steer

SEPT-2015 Summary

Revenue: $2,002/steer (1,450 lbs @ $138.06/cwt)

Feeder Cattle Purchase: $1,811/steer (848 lbs @ $213.60/cwt)

Gross Margin (Fat-Feeder): $191/hd

Break-Even COG (602 lbs added): $0.21/lb

VS

Estimated COG: $0.82/lb

= -$357/steer margins

Historical and Projected Kansas Feedlot Net Returns
(as of 11/11/15')

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

Sept. 15': -$357/steer

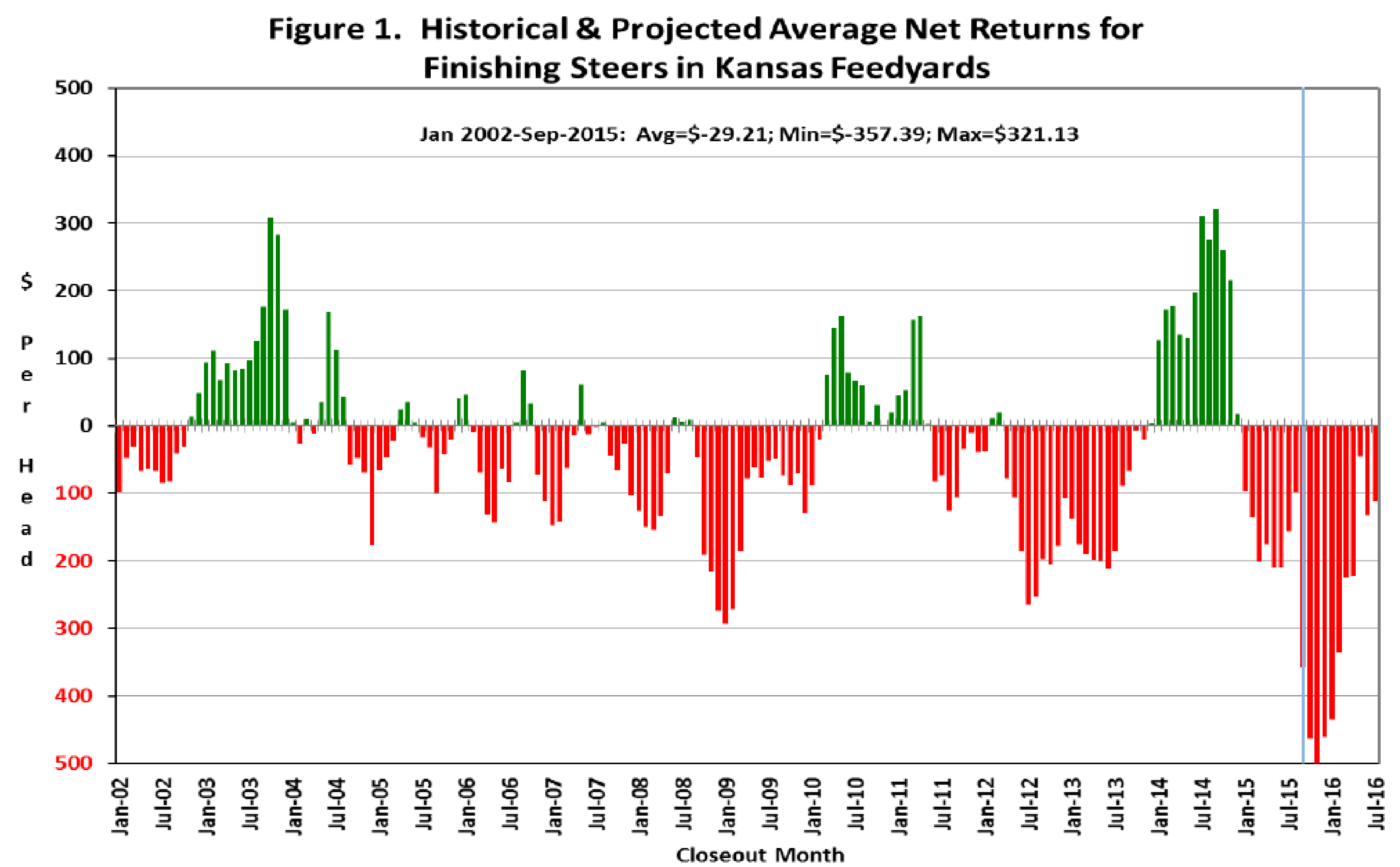
Table 1. Projected Values for Finishing Steers in Kansas Feedyards*

Closeout Mo-Yr	Net Return	FCOG**	Fed Price	Feeder Price	Breakeven FCOG**	Breakeven Fed Price	Breakeven Feeder Price
Oct-15	-462.51	84.73	133.20	215.75	5.65	165.25	161.85
Nov-15	-499.65	84.43	132.36	219.15	-2.22	167.33	160.52
Dec-15	-461.06	85.74	134.13	212.71	3.73	165.97	160.67
Jan-16	-435.38	86.51	135.29	208.73	4.76	165.76	160.17
Feb-16	-334.95	86.82	135.92	203.72	27.90	159.52	164.34
Mar-16	-224.79	86.40	137.01	190.58	44.41	153.10	164.49
Apr-16	-222.92	85.19	128.58	181.71	46.40	144.47	154.80
May-16	-45.52	85.16	131.21	163.29	77.02	134.45	157.92
Jun-16	-131.70	85.43	124.43	162.02	62.14	133.70	146.62
Jul-16	-111.29	86.01	125.38	158.17	65.77	133.05	145.81

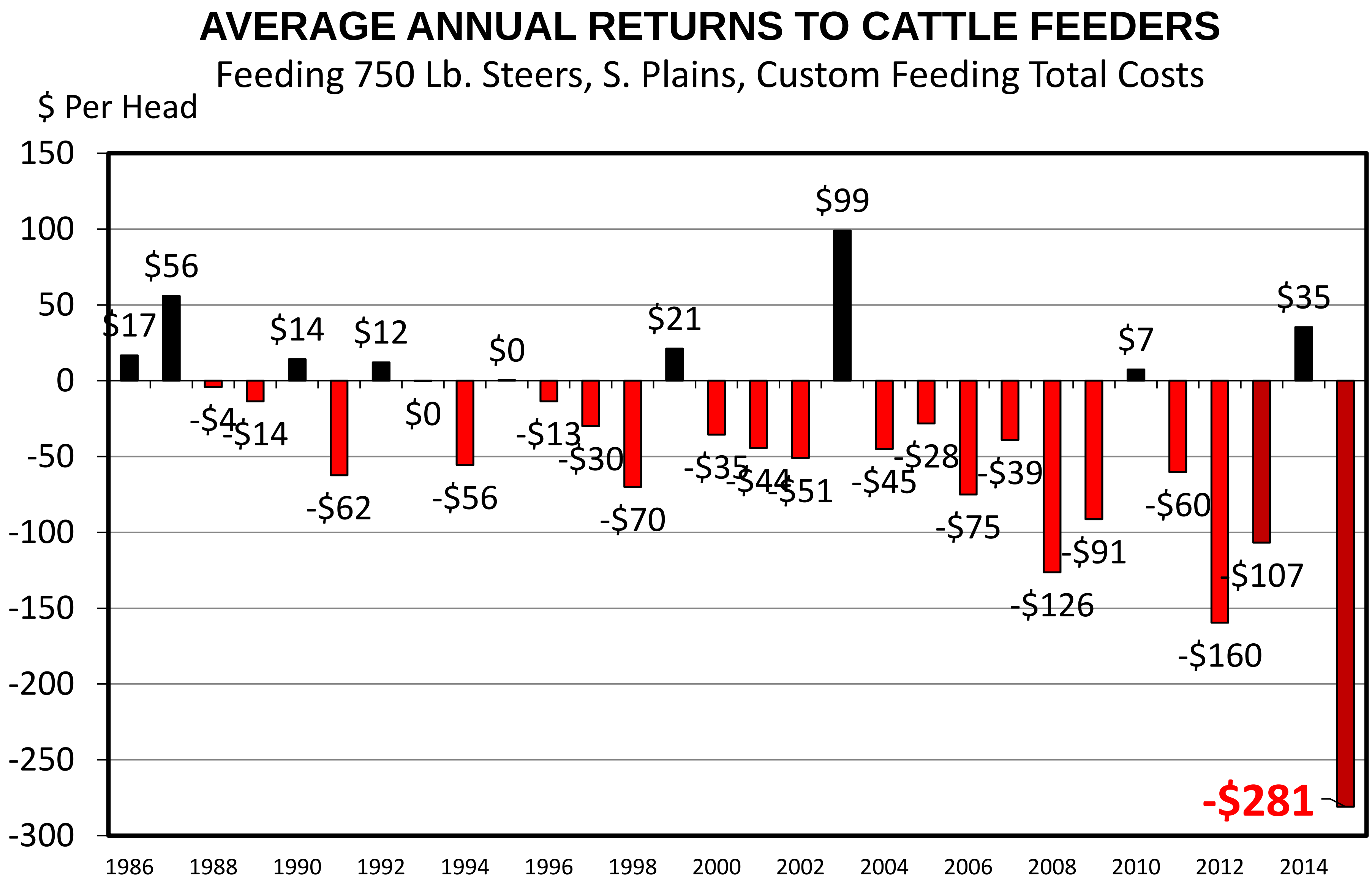
Representative Barometer for Trends in Profitability

Historical and Projected Kansas Feedlot Net Returns (as of 11/11/15')

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



LMIC Approach Yields Similar Bottom-Line…



Data Source: USDA-AMS, Compiled and Analysis by LMIC

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11/18/15

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Quarterly Forecasts (LMIC: 11/30/15)

Year Quarter	Comm'l Slaughter	% Chg. from Year Ago	Average Dressed Weight	% Chg. from Year Ago	Comm'l Beef Production	% Chg. from Year Ago
2015						
I	6,967	-5.5	813.0	2.2	5,664	-3.5
II	7,227	-7.8	810.1	2.7	5,855	-5.3
III	7,288	-4.5	832.4	2.8	6,066	-1.8
IV	7,283	-0.6	840.7	2.3	6,123	1.7
Year	28,765	-4.7	824.2	2.5	23,708	-2.2
2016						
I	7,140	2.5	821.8	1.1	5,868	3.6
II	7,405	2.5	813.0	0.4	6,020	2.8
III	7,623	4.6	835.6	0.4	6,370	5.0
IV	7,519	3.2	839.1	-0.2	6,309	3.0
Year	29,687	3.2	827.5	0.4	24,567	3.6
2017						
I	7,446	4.3	827.4	0.7	6,161	5.0
II	7,720	4.3	815.9	0.4	6,299	4.6
III	7,815	2.5	839.3	0.4	6,559	3.0
IV	7,857	4.5	842.1	0.4	6,616	4.9
Year	30,838	3.9	831.3	0.5	25,635	4.3

Quarterly Forecasts (LMIC: 11/30/15)

	Live Sltr.	% Chg.	Feeder Steer Price	
Year	Steer Price	from	Southern Plains	
Quarter	5-Mkt Avg	Year Ago	7-800#	5-600#
2015				
I	162.43	11.0	215.87	276.14
II	158.11	7.0	225.29	279.32
III	144.22	-9.0	214.38	246.04
IV	132-133	-20.0	183-184	214-216
Year	149-150	-3.3	209-210	253-255
2016				
I	140-144	-12.6	178-182	217-222
II	144-148	-7.7	181-186	221-228
III	138-143	-2.6	178-184	217-225
IV	138-144	6.4	175-182	210-219
Year	141-145	-4.3	179-183	217-223
2017				
I	138-145	-0.4	173-181	213-223
II	138-146	-2.7	174-183	214-225
III	133-143	-1.8	171-181	212-223
IV	134-145	-1.1	167-179	202-216
Year	137-143	-2.1	173-179	212-220

$93/cwt spread

Quarterly Forecasts (LMIC: 11/30/15)

Year Quarter	Live Sltr. Steer Price 5-Mkt Avg	% Chg. from Year Ago	Feeder Steer Price Southern Plains 7-800#	Feeder Steer Price Southern Plains 5-600#
2015				
I	162.43	11.0	215.87	276.14
II	158.11	7.0	225.29	279.32
III	144.22	-9.0	214.38	246.04
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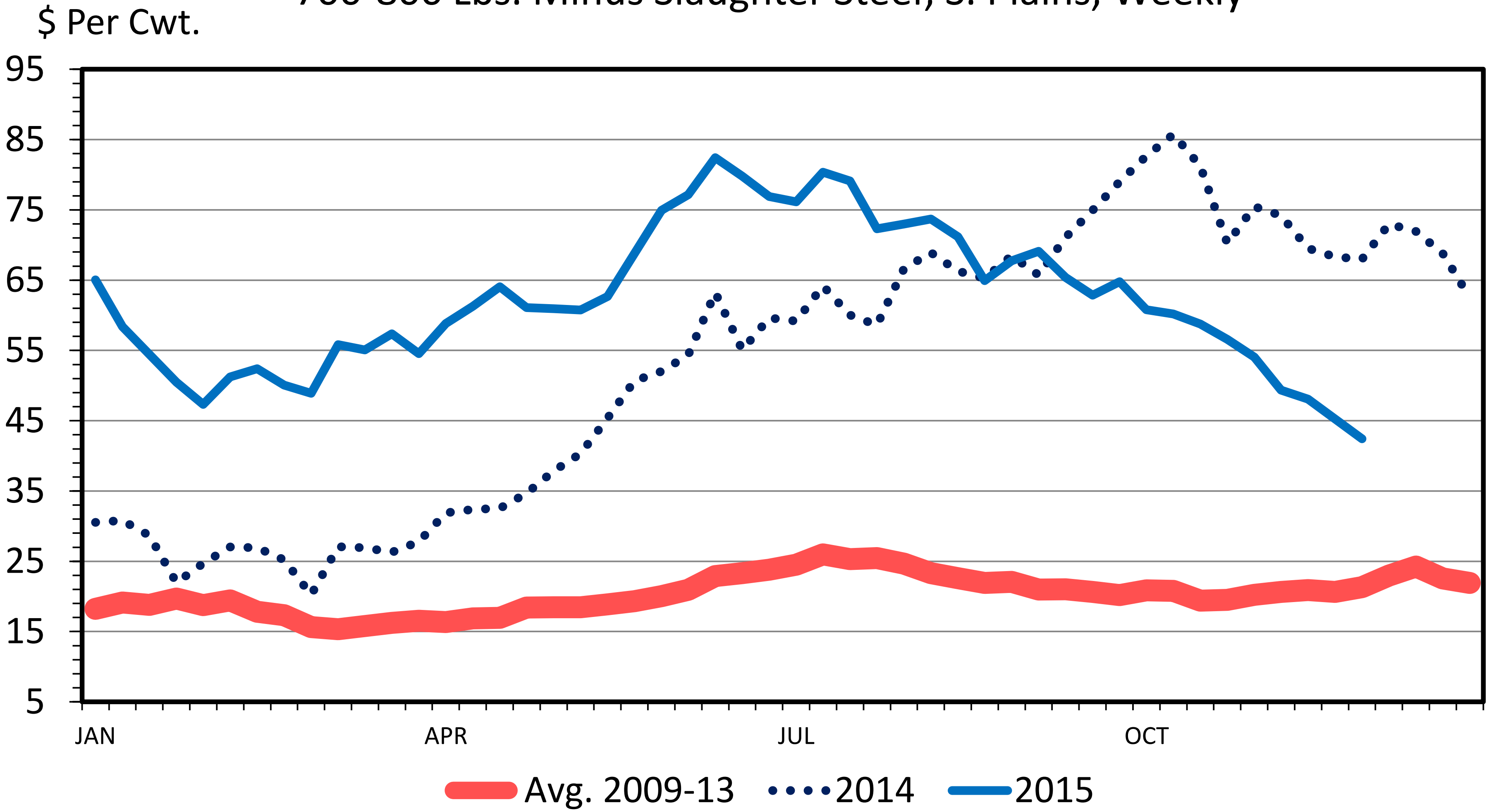
2017				
I	138-145	-0.4	173-181	213-223
II	138-146	-2.7	174-183	214-225
III	133-143	-1.8	171-181	212-223
IV	134-145	-1.1	167-179	202-216
Year	**137-143**	**-2.1**	**173-179**	**212-220**

$43/cwt spread

FEEDER STEER vs FED STEER PRICES

700-800 Lbs. Minus Slaughter Steer, S. Plains, Weekly



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

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Beef, Pork, & Broiler Meat Production & Trade Overview

USDA Long-Term projections (2015-2024)

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

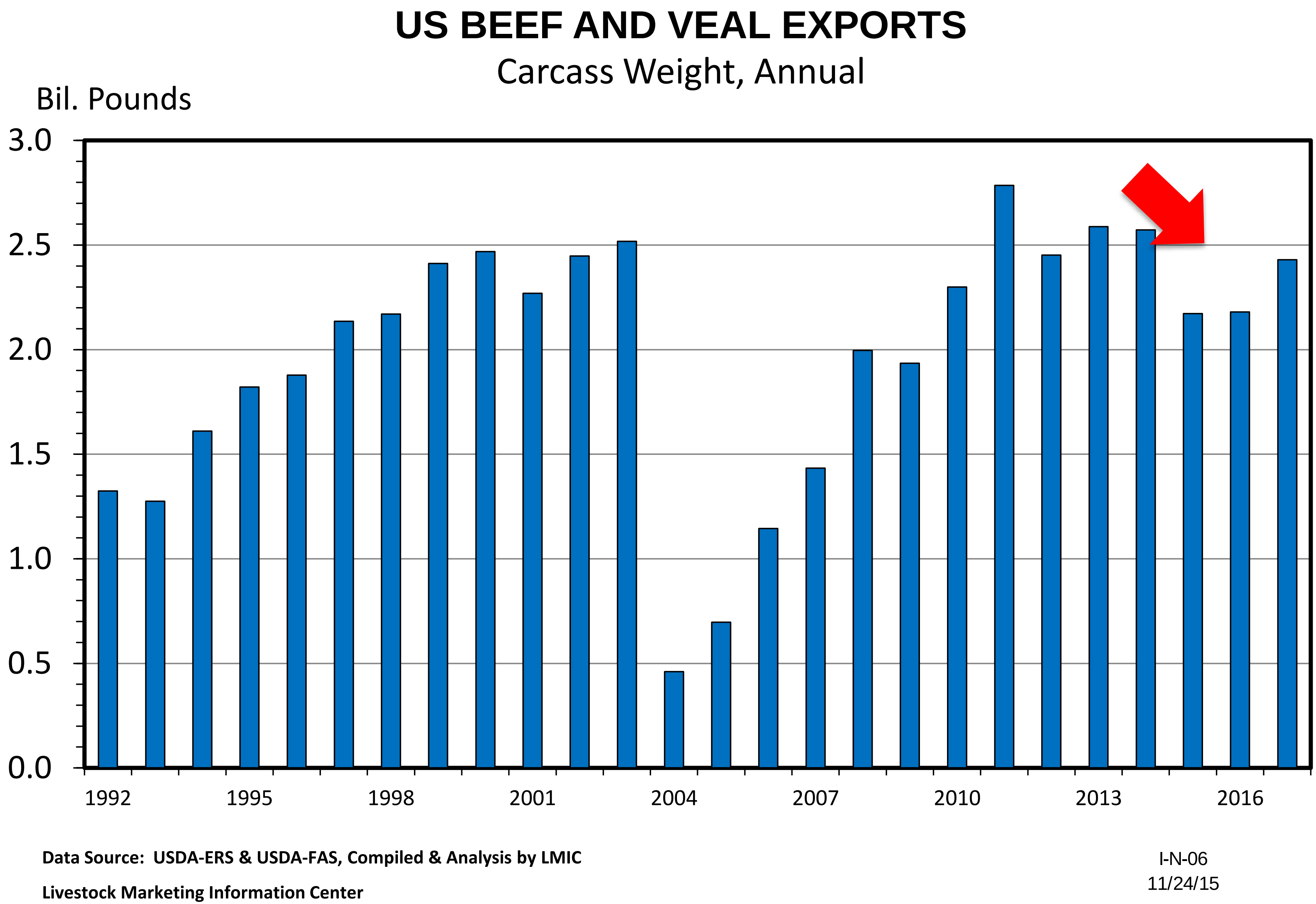
	Red Meat	Poultry	Total
1995	120	87	208
2008	113	103	**216**
2013	104	99	204
2014	102	100	202
2015	105	105	210
2024	103	112	**215**

2024 (215 lbs) < 2008 (216 lbs)

Broad "Global Factors"

- Recent adverse developments:
  - Geo-political risks
  - Global GDP forecast reductions
  - U.S. Dollar strength = pressure on U.S. exports

- Longer-term positive aspects:
  - Global population & income growth
  - U.S. maintains multiple comparative advantages


US BEEF AND VEAL EXPORTS
Carcass Weight, Annual
Bil. Pounds
3.0
2.5
2.0
1.5
1.0
0.5
0.0
1992
1995
1998
2001
2004
2007
2010
2013
2016
Data Source: USDA-ERS & USDA-FAS, Compiled & Analysis by LMIC
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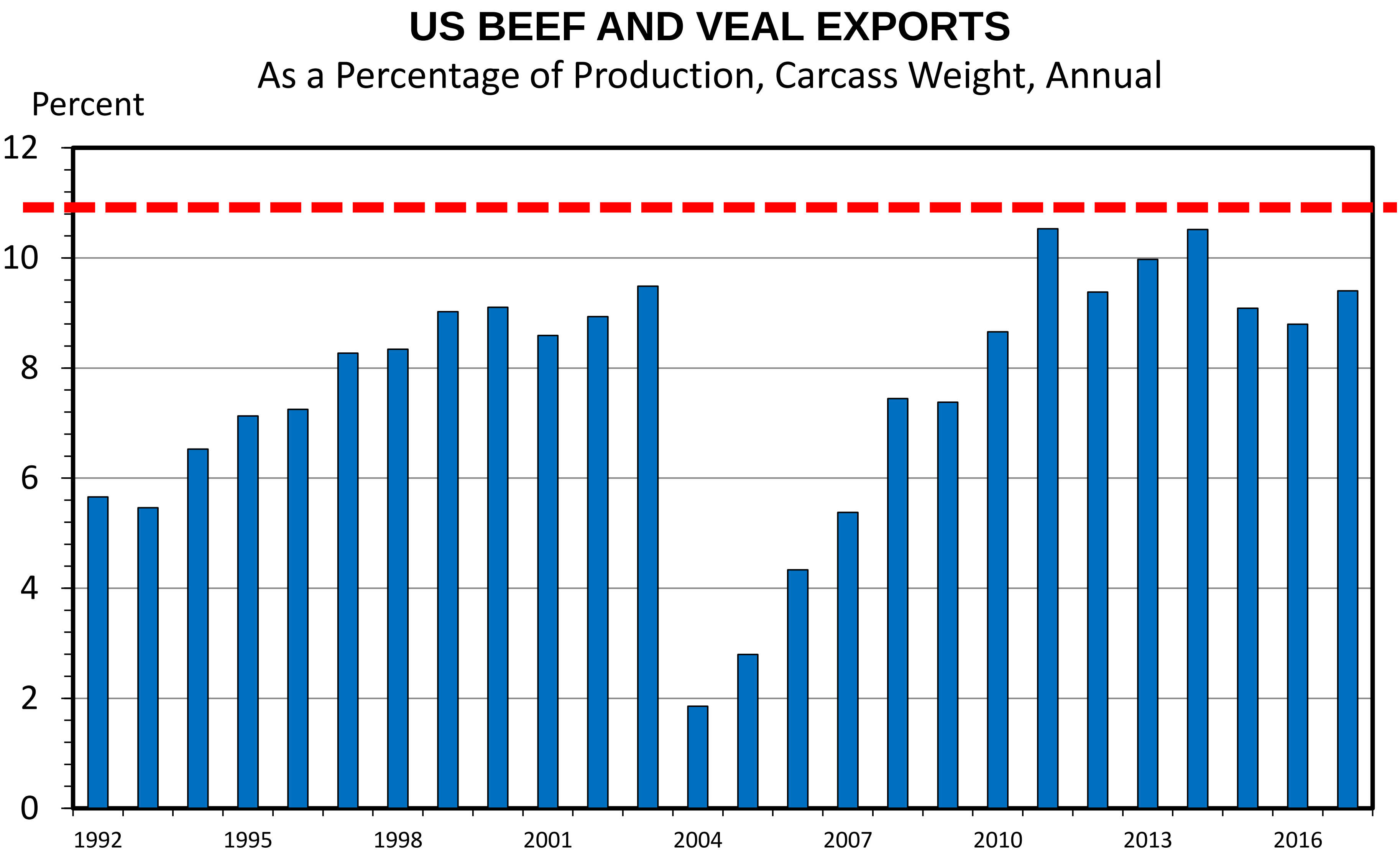

Data Source: USDA-ERS & USDA-FAS, Compiled & Analysis by LMIC

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I-N-07
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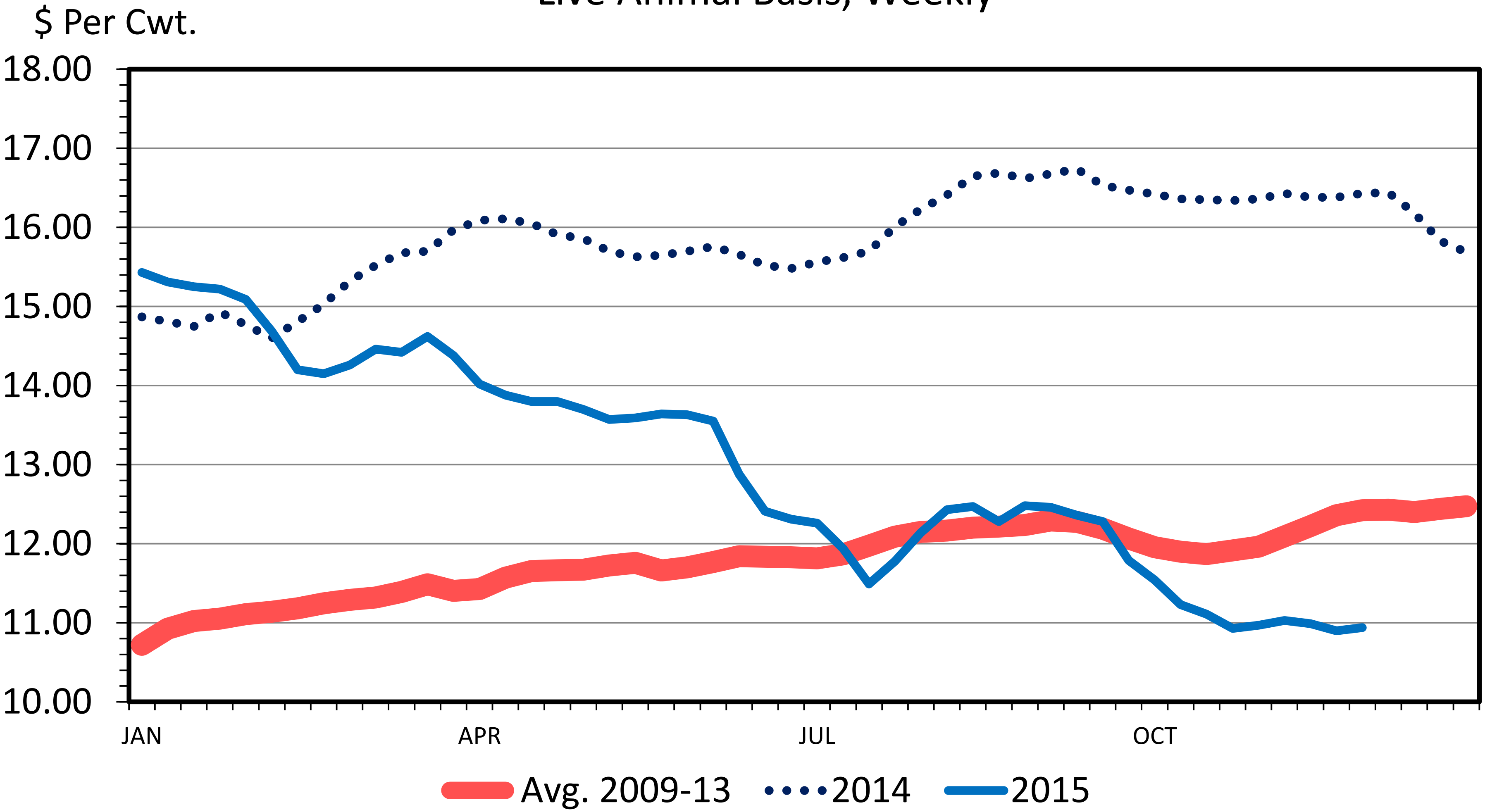
STEER HIDE AND OFFAL VALUE

Live Animal Basis, Weekly



Data Source: USDA-AMS

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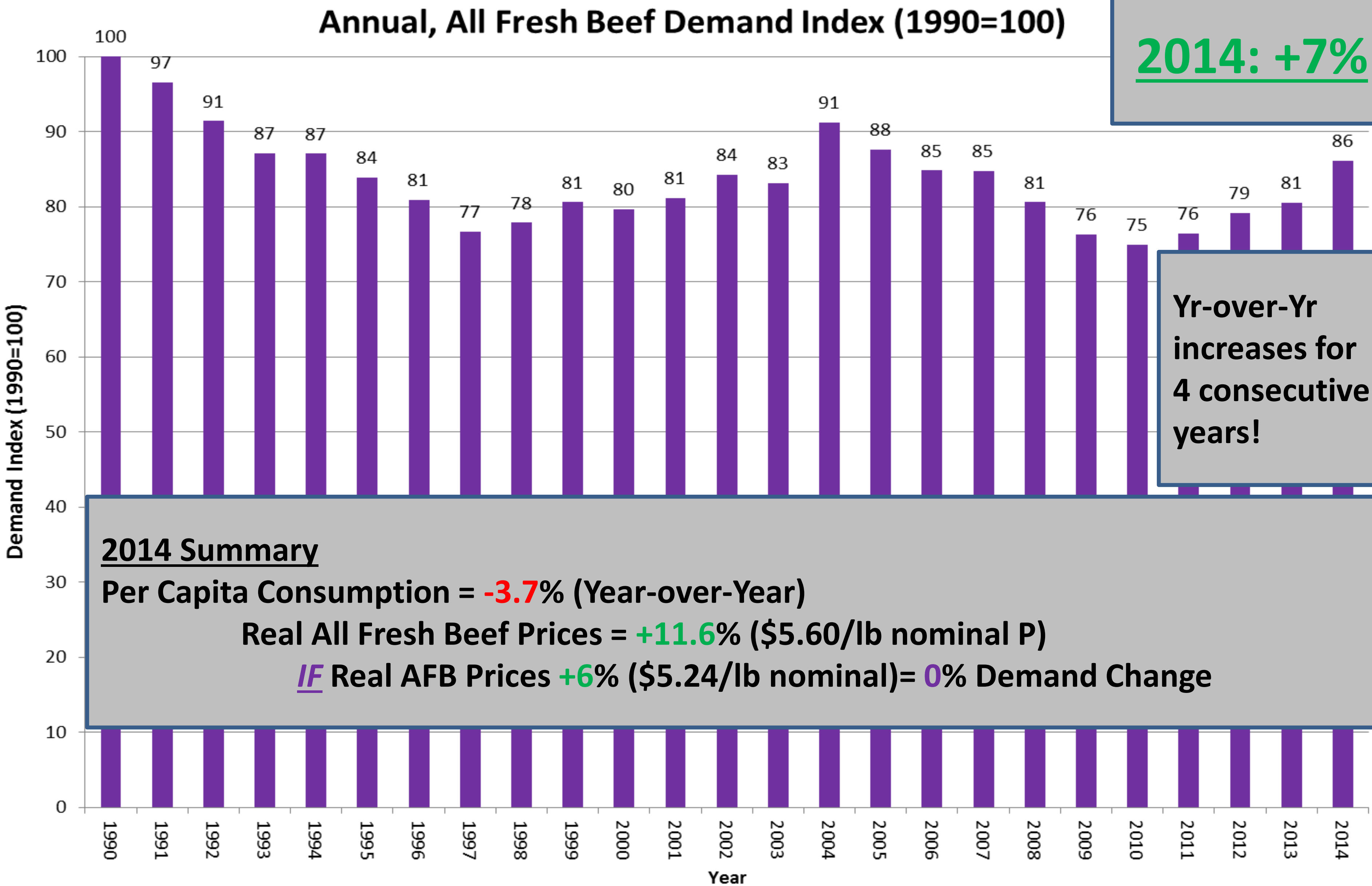
12/07/15



2014: +7%

Yr-over-Yr increases for 4 consecutive years!

2014 Summary

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

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

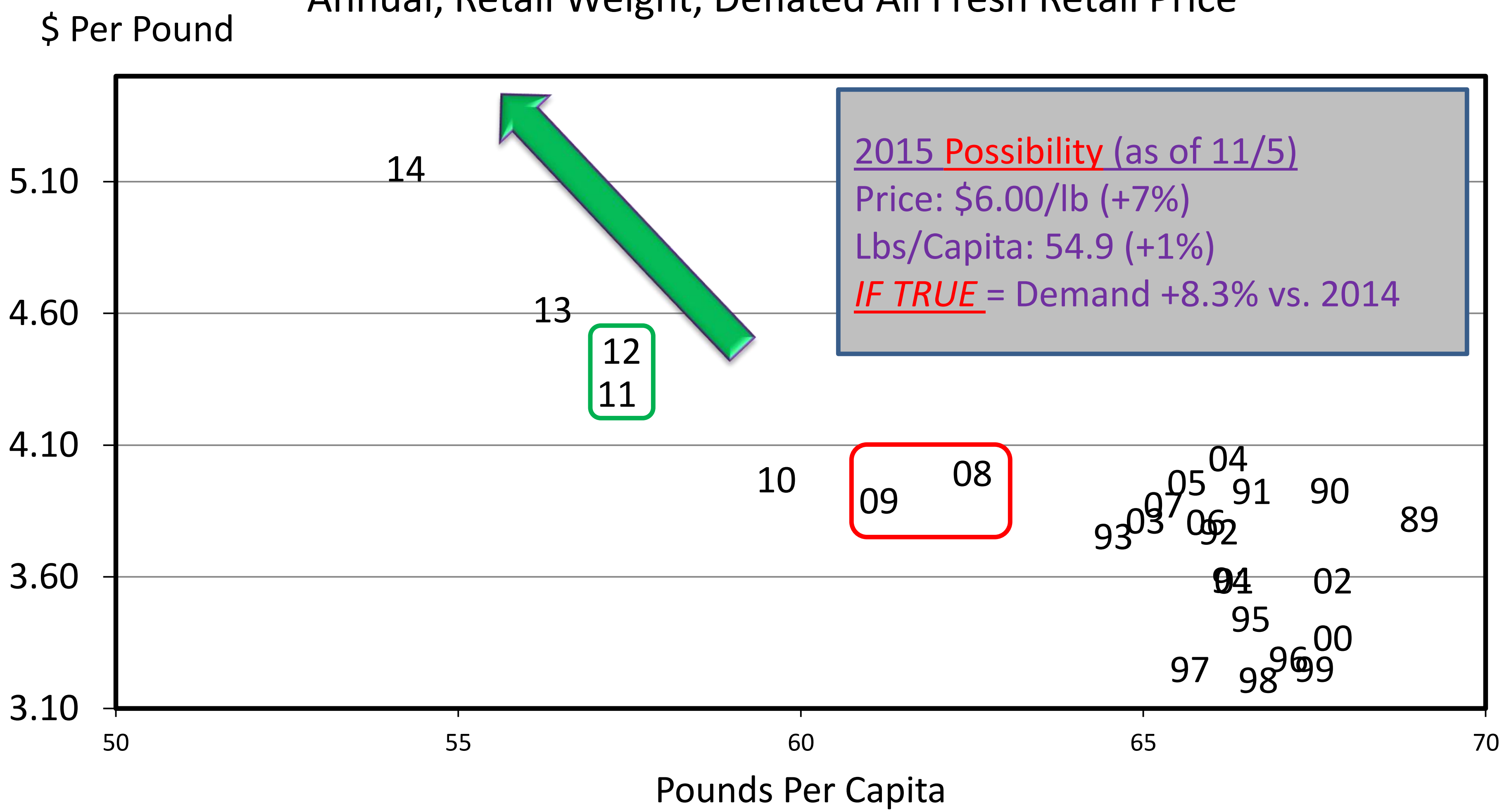
***IF* Real AFB Prices +6% ($5.24/lb nominal)= 0% Demand Change**

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

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

BEEF PRICE-QUANTITY RELATIONSHIP

Annual, Retail Weight, Deflated All Fresh Retail Price



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

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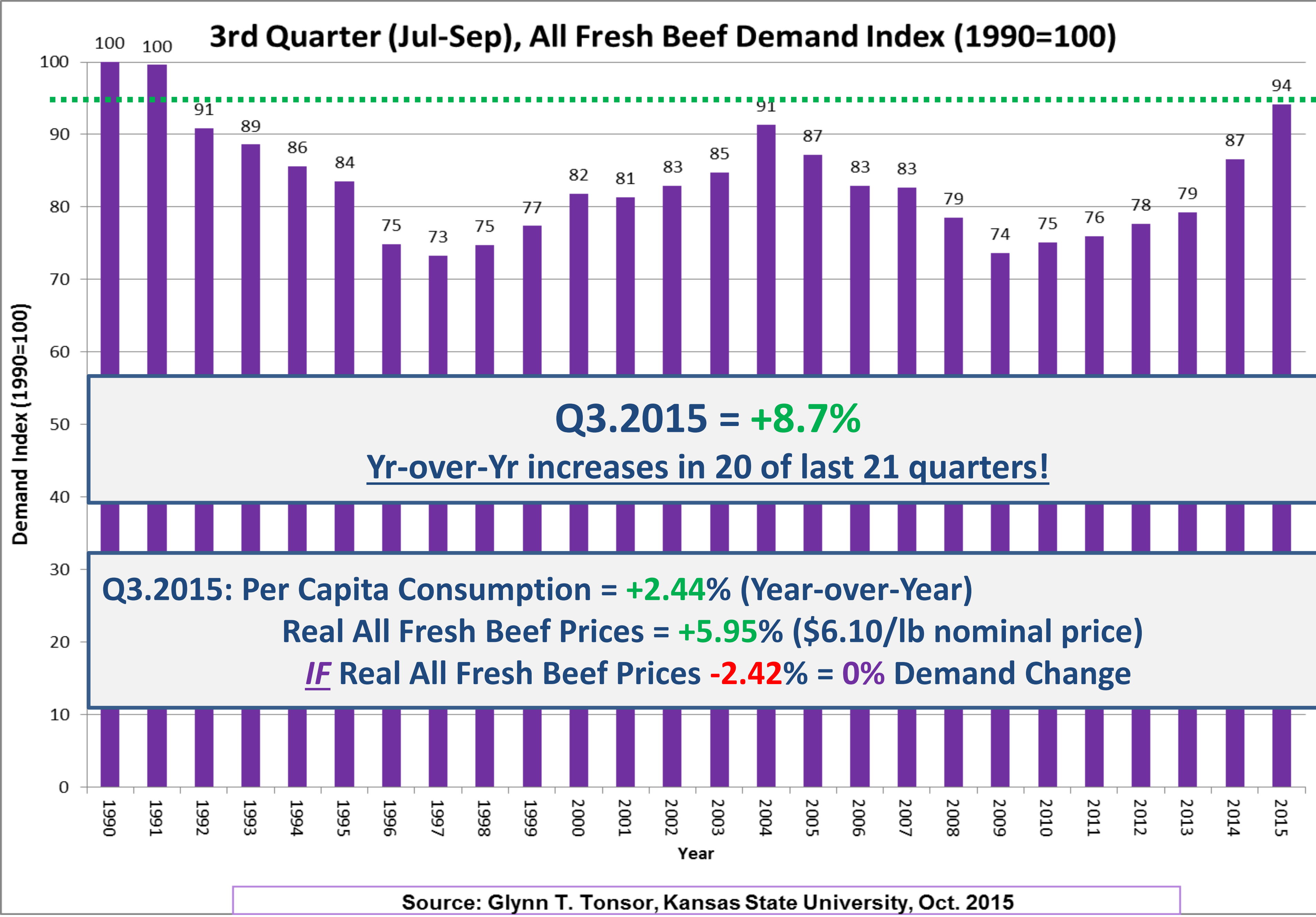
3rd Quarter (Jul-Sep), All Fresh Beef Demand Index (1990=100)
Demand Index (1990=100)
Year
100 100 91 89 86 84 75 73 75 77 82 81 83 85 91 87 83 83 79 74 75 76 78 79 87 94
1990 1991 1992 1993 1994 1995 1996 1997 1998 1999 2000 2001 2002 2003 2004 2005 2006 2007 2008 2009 2010 2011 2012 2013 2014 2015
Q3.2015 = +8.7%
Yr-over-Yr increases in 20 of last 21 quarters!
Q3.2015: Per Capita Consumption = +2.44% (Year-over-Year)
Real All Fresh Beef Prices = +5.95% ($6.10/lb nominal price)
IF Real All Fresh Beef Prices -2.42% = 0% Demand Change
Source: Glynn T. Tonsor, Kansas State University, Oct. 2015

Take-Home Summary Points

- Industry at tipping point on role of tight supplies
- **Demand's role will become clearer going forward**
  - http://www.agmanager.info/livestock/marketing/Beef%20Demand/BeefDemand_08-28-15.pdf
- Identifying & acting upon comparative advantage will increasingly be key!

Misc. Additional Candidates for Q&A

Mandatory COOL

- Monday’s WTO ruling = $1.01 billion in tariffs
- Recent economic impact analysis:
  - http://www.agmanager.info/livestock/policy/default.asp
  - 2009 Rule (10-yr cumulative NPV):
    - Industry Loss: Beef = $8.07 billon & Pork = $1.3 billion
    - Consumer Loss: Beef = $5.98 billion & Pork = $1.79 bil.
    - Poultry Ind. Gain = $753 million
      - Only 33-42% of beef & +/-16% of pork are MCOOL covered
        - » Need demand increases of 6.8% (bf) & 5.6% (pk) to avoid loss
  - 2013 Rule: Similar story w/ smaller magnitudes

Research of Note:
Emily Mollohan's MS Thesis

- 1993-2013 Calf (500#) and Yearling (700#) Prices

- 1% increase in corn price:
  - Drops Calf-Yearling price spread by 0.37%

- 1% increase in expected fed cattle price:
  - Expands Calf-Yearling price spread by 1.17%

Research of Note:
Matt Herrington's PAS Article

(http://pas.fass.org/content/29/4/435.abstract)

- 1990-2012 *Focus on Feedlot* Analysis:

Table 5. Annual growth rate of cattle performance variables[1]

Model	AGR 1990 to 2012 (%)
Steer ADG	0.610[a]
Heifer ADG	0.653[a]
Steer G:F	0.422[a]
Heifer G:F	0.377[a]
Steer BW gain	0.537[a]
Heifer BW gain	0.570[a]
Steer TFC	−0.040
Heifer TFC	−0.002

✓**Evidence of feedlots becoming more efficient**.

- Also note recent *FoF* annual report (http://www.bookstore.ksre.ksu.edu/pubs/MF3247.pdf)

Economics of E.Coli vaccinations

- **Tonsor, G.T.** and T.C. Schroeder. (2015). "Market Impacts of E. Coli Vaccination in U.S. Feedlot Cattle." *Agricultural and Food Economics*. 3:7.
  - Vaccine available since 2009 with limited use
    - $1.0 to $1.8 bil. loss over 10 yrs **<u>if adopted w/o + demand</u>**
  - Retail (1.7 to 3.0%) or export (18.1 to 32.6%) beef demand increases could incentivize adoption
  - Retail (2.2 to 3.9%) or wholesale (1.2 to 2.2%) cost savings could incentivize adoption

Situation w/r/t Public Acceptance & Food Demand

- Importance of attributes is clear

- **<u>HOW</u>** public wants outcomes achieved is less clear
  - *<u>May also be changing over time…</u>*

Situation w/r/t Public Acceptance & Food Demand

- Center for Food Integrity's Sept. 4, 2013 tweet:

"Science tells us if we can do something.

Society tells us if we should do it."

More information available at:

www.agmanager.info

This presentation will be available in PDF format at:

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

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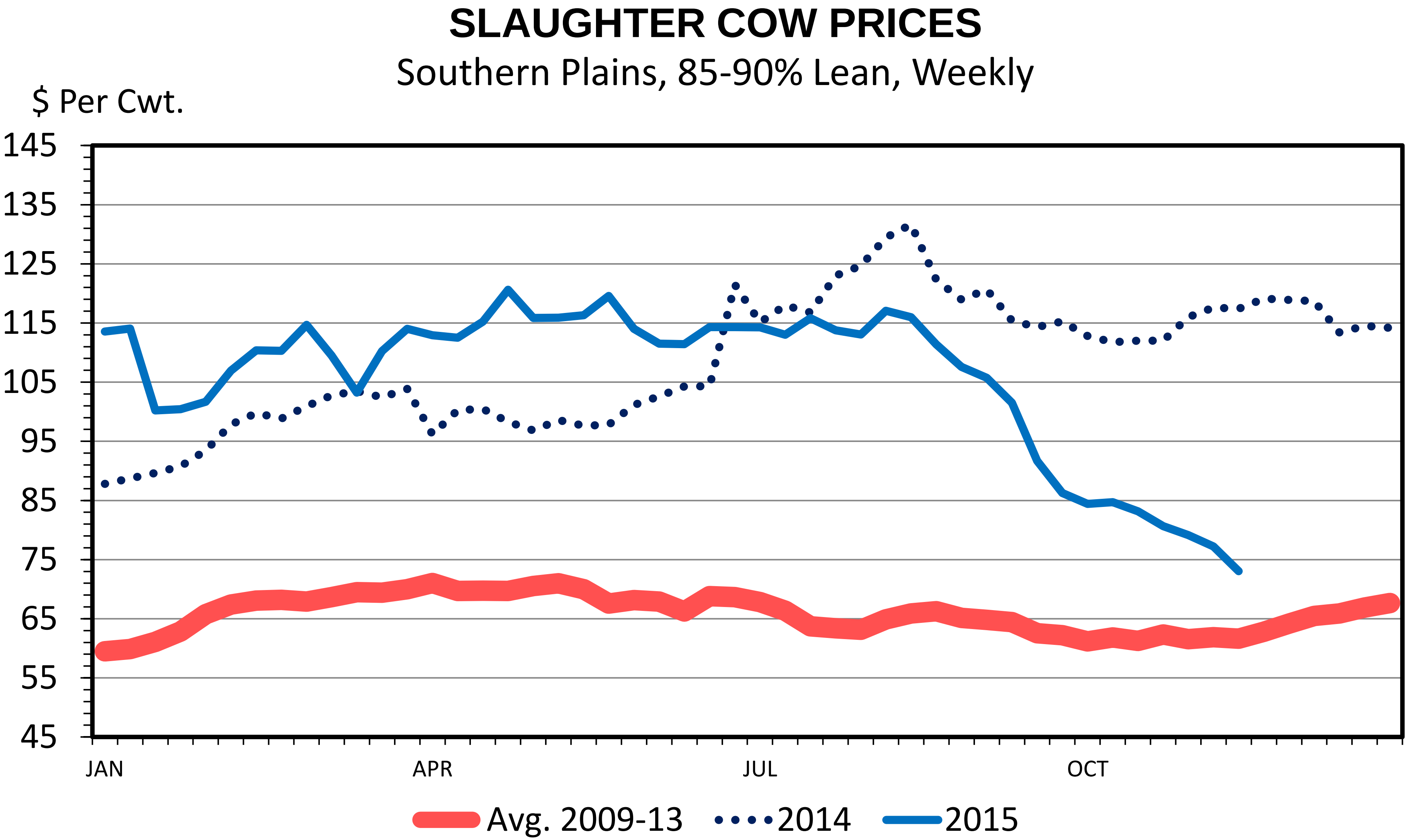

Data Source: USDA-AMS

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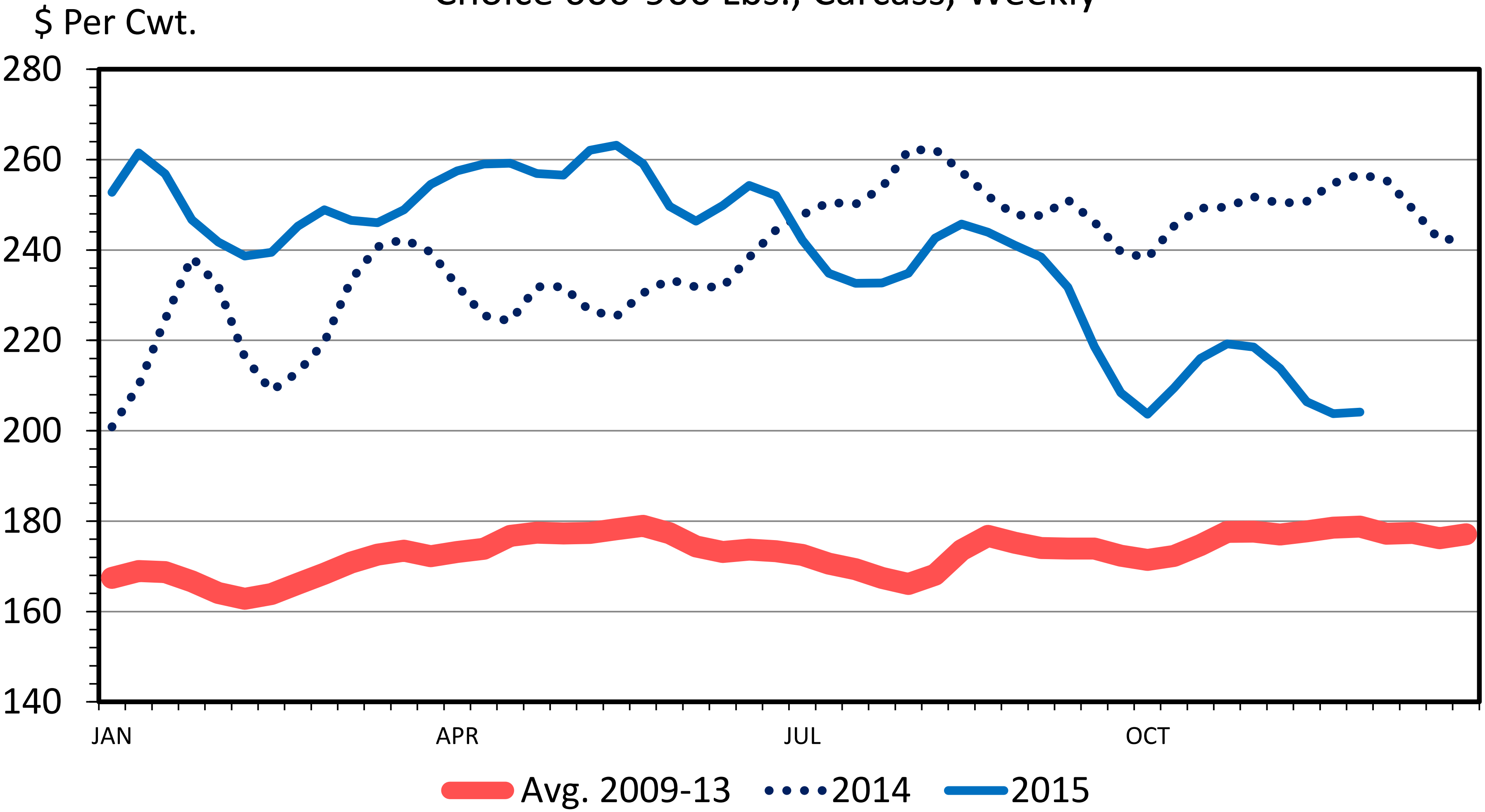
BOXED BEEF CUTOUT VALUE

Choice 600-900 Lbs., Carcass, Weekly



Data Source: USDA-AMS

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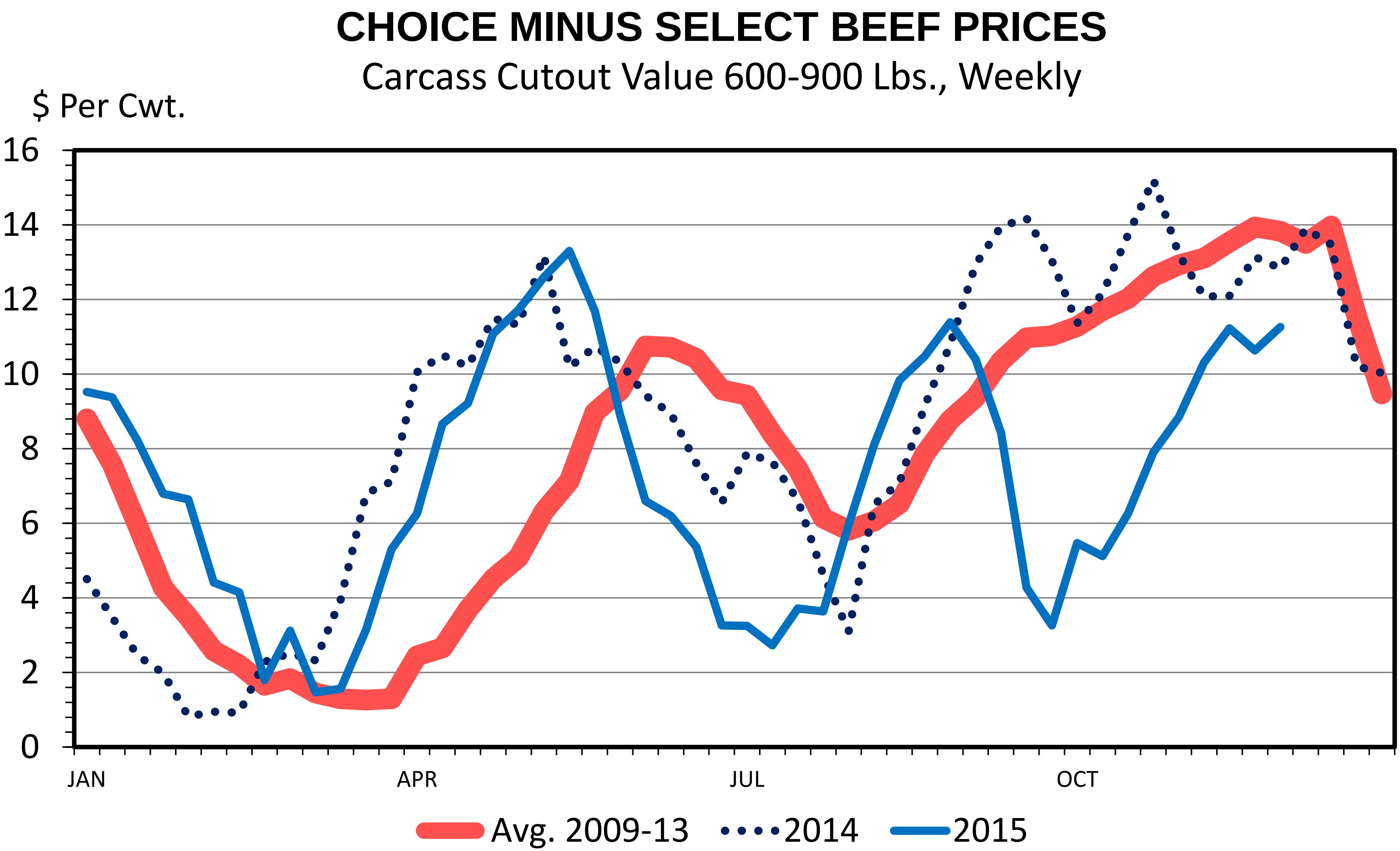

Data Source: USDA-AMS, Compiled & Analysis by LMIC

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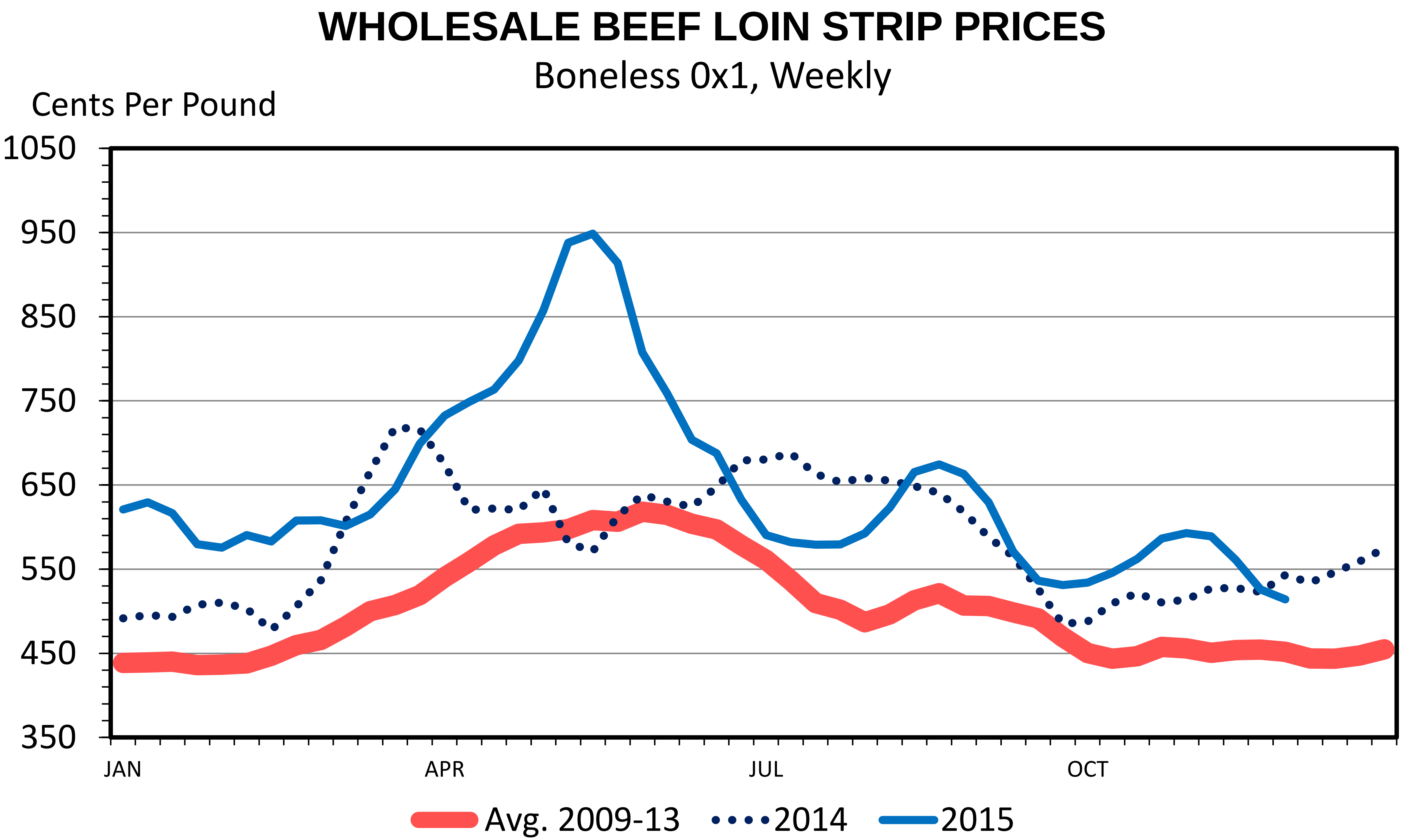

Data Source: USDA-AMS

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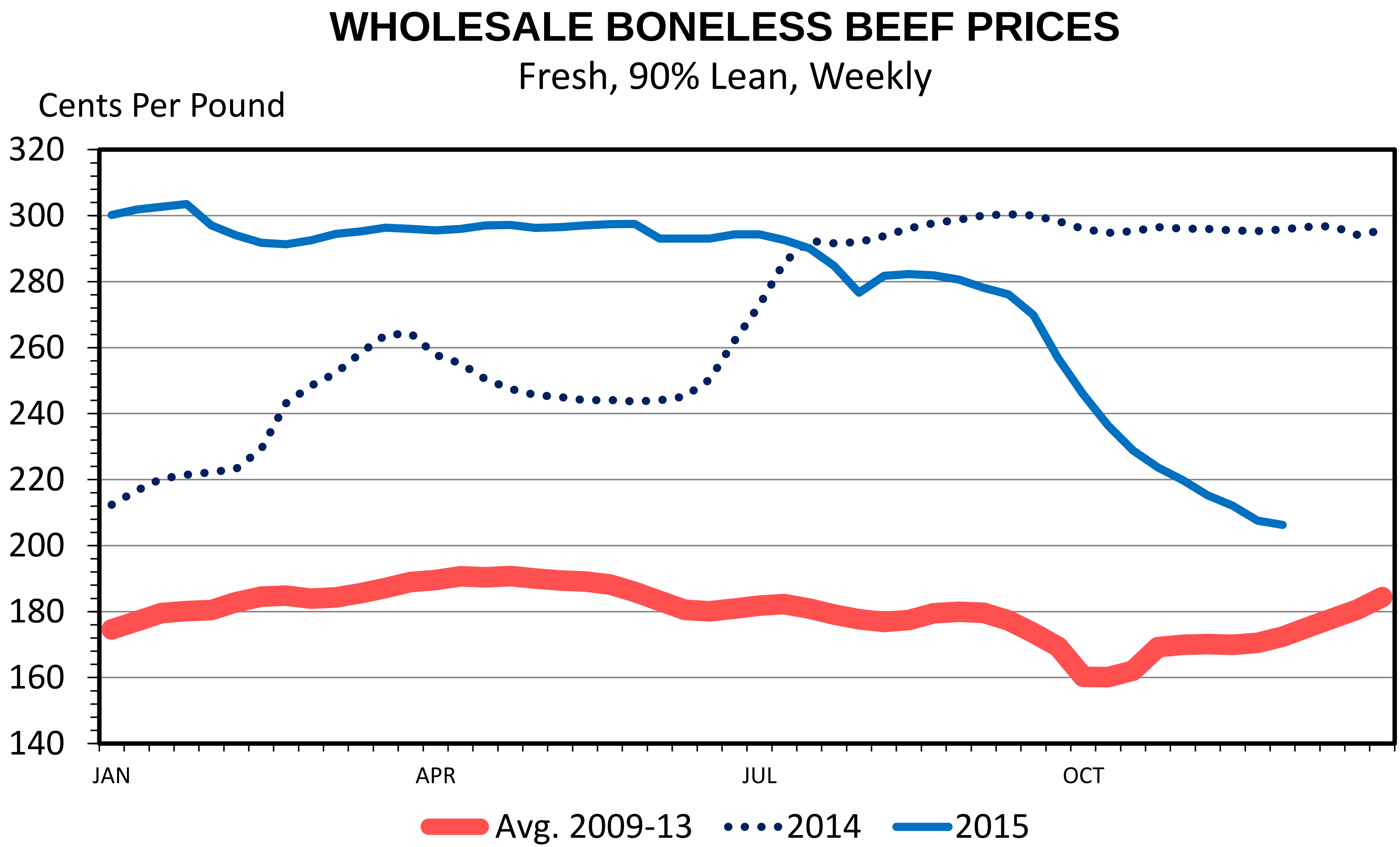

Data Source: USDA-AMS

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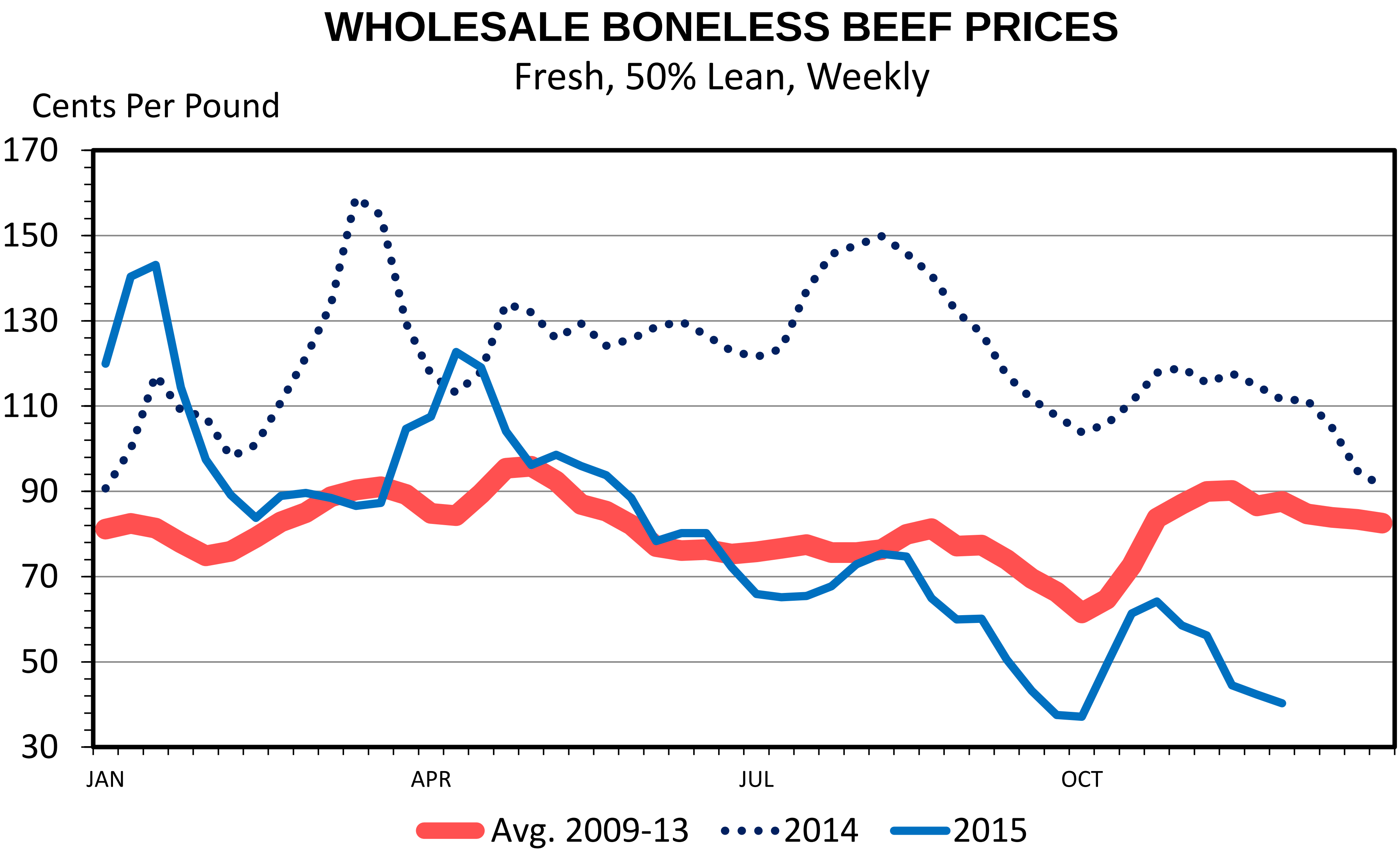

Data Source: USDA-AMS

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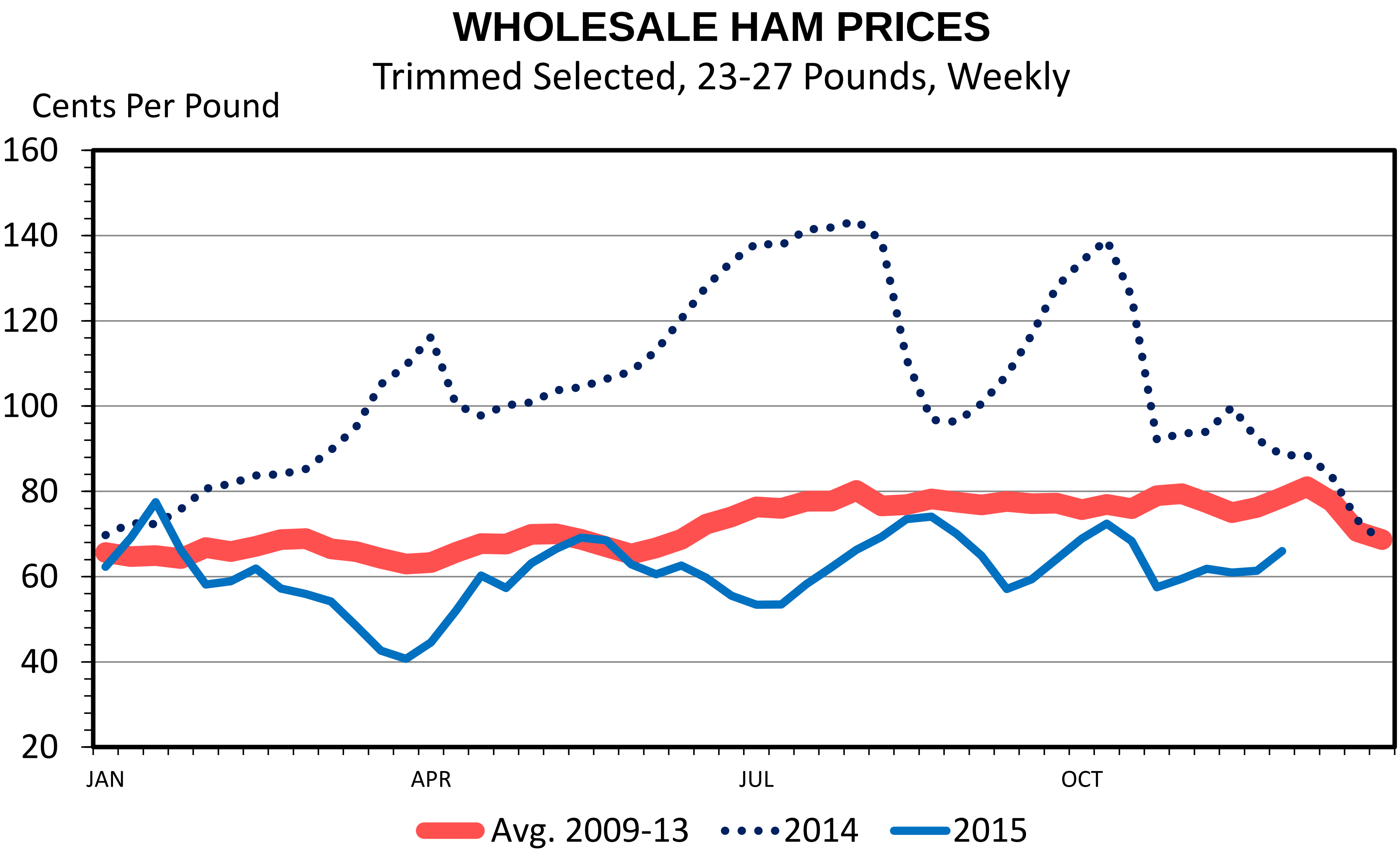

Data Source: USDA-AMS

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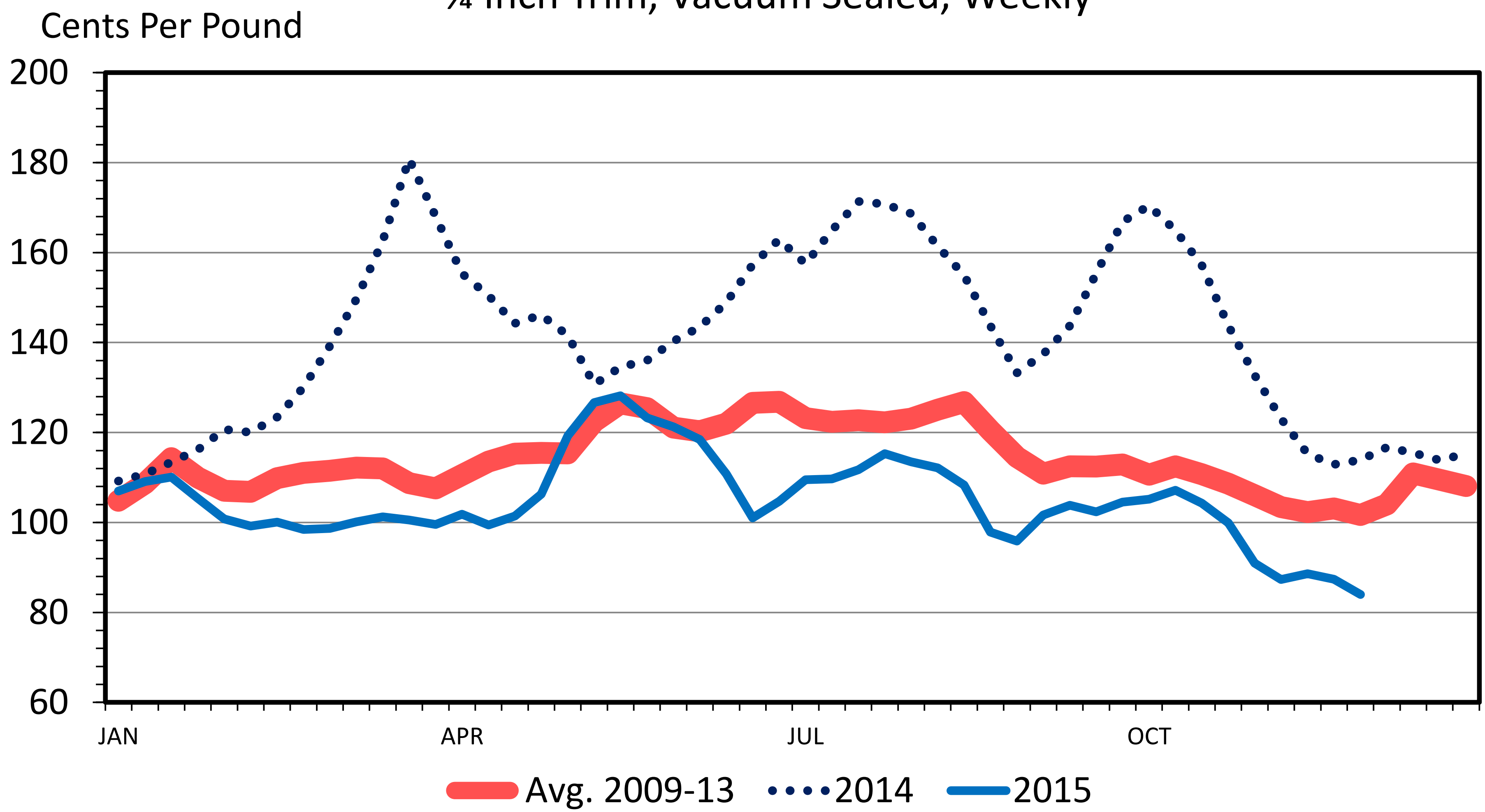
WHOLESALE PORK LOIN PRICES

¼ Inch Trim, Vacuum Sealed, Weekly



Data Source: USDA-AMS

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