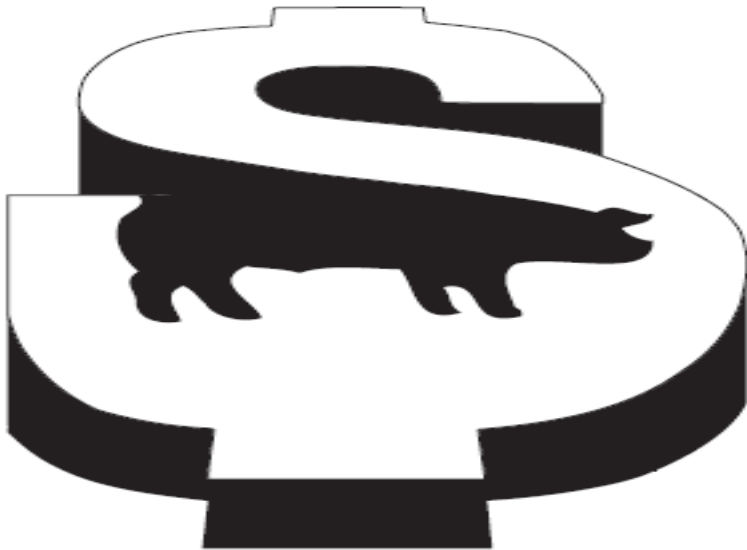




K-STATE
Research and Extension

Kansas State University
2015
Swine Profitability
Conference

Forum Hall
K-State Union
Tuesday, February 3



Sponsored by
Department of Animal Sciences and Industry
K-State Research and Extension
Kansas Pork Association
National Pork Board

***Economic
Considerations
for Growing the
U.S. Swine
Industry***

**Dr. Glynn Tonsor,
Kansas State Univ.**



Feedstuffs & Forage Situation

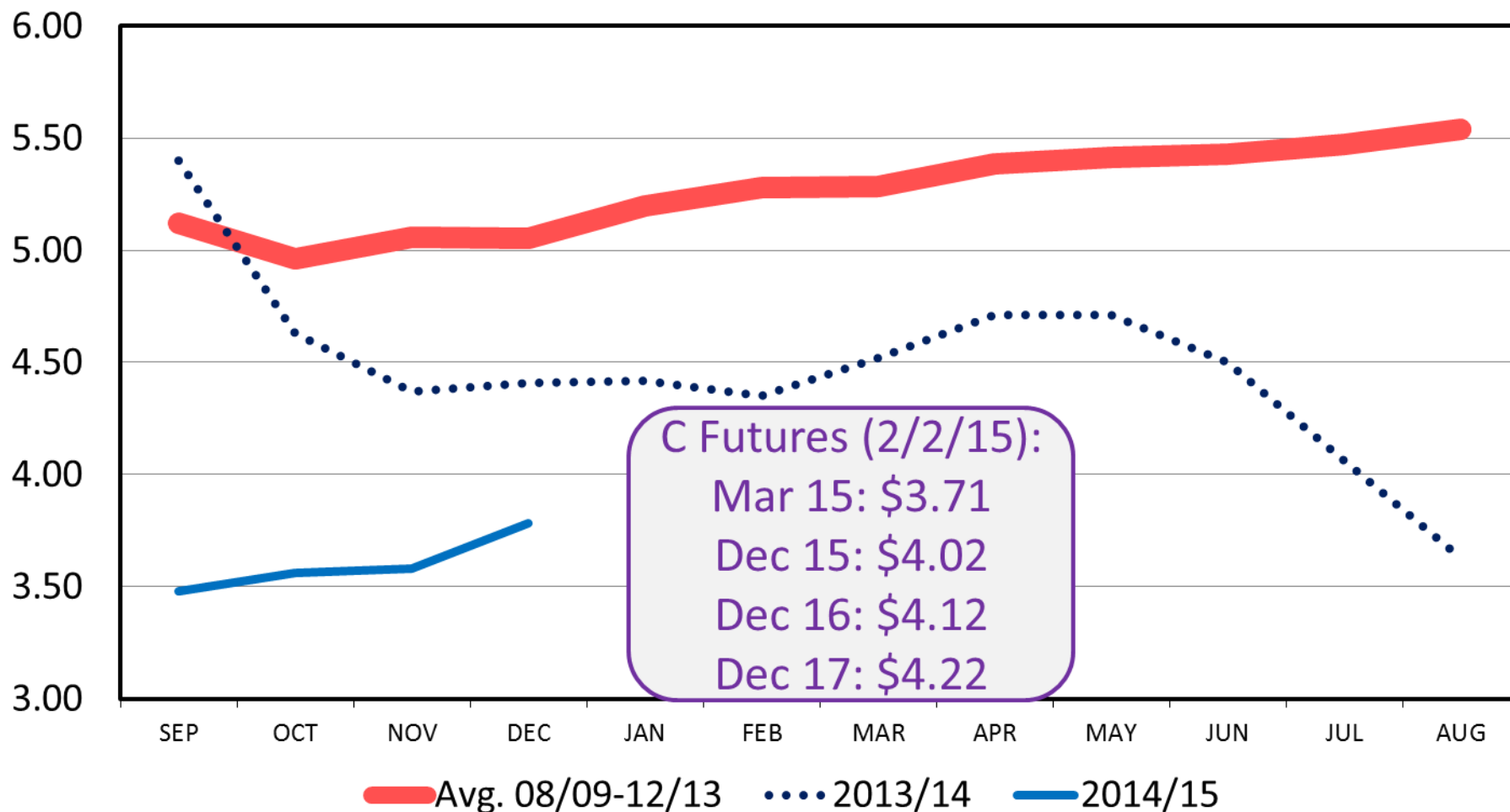
BULLISH (\$\$\$)
FOR
LIVESTOCK
INDUSTRY



CORN – MONTHLY AVERAGE PRICE

Received by Farmers, U.S., Crop Year

\$ Per Bu.



Data Source: USDA-NASS
Livestock Marketing Information Center

G-P-09
01/30/15



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
U.S. corn long-term projections								
Item	2013/14	2014/15	2015/16	2016/17	2017/18	2018/19	2019/20	2024/25
Area (million acres):								
Harvested acres	87.7	83.1	80.4	82.4	82.4	82.4	81.9	81.4
Yield:								
Bushels per harvested acre	158.8	173.4	167.2	169.2	171.2	173.2	175.3	185.3
Ending stocks	1,236	2,008	1,733	1,738	1,753	1,773	1,748	1,658
Stocks/use ratio, percent	9.1	14.7	12.6	12.4	12.4	12.4	12.1	11.0
Prices (dollars per bushel):								
Farm price	4.46	3.50	3.40	3.50	3.50	3.50	3.55	3.75

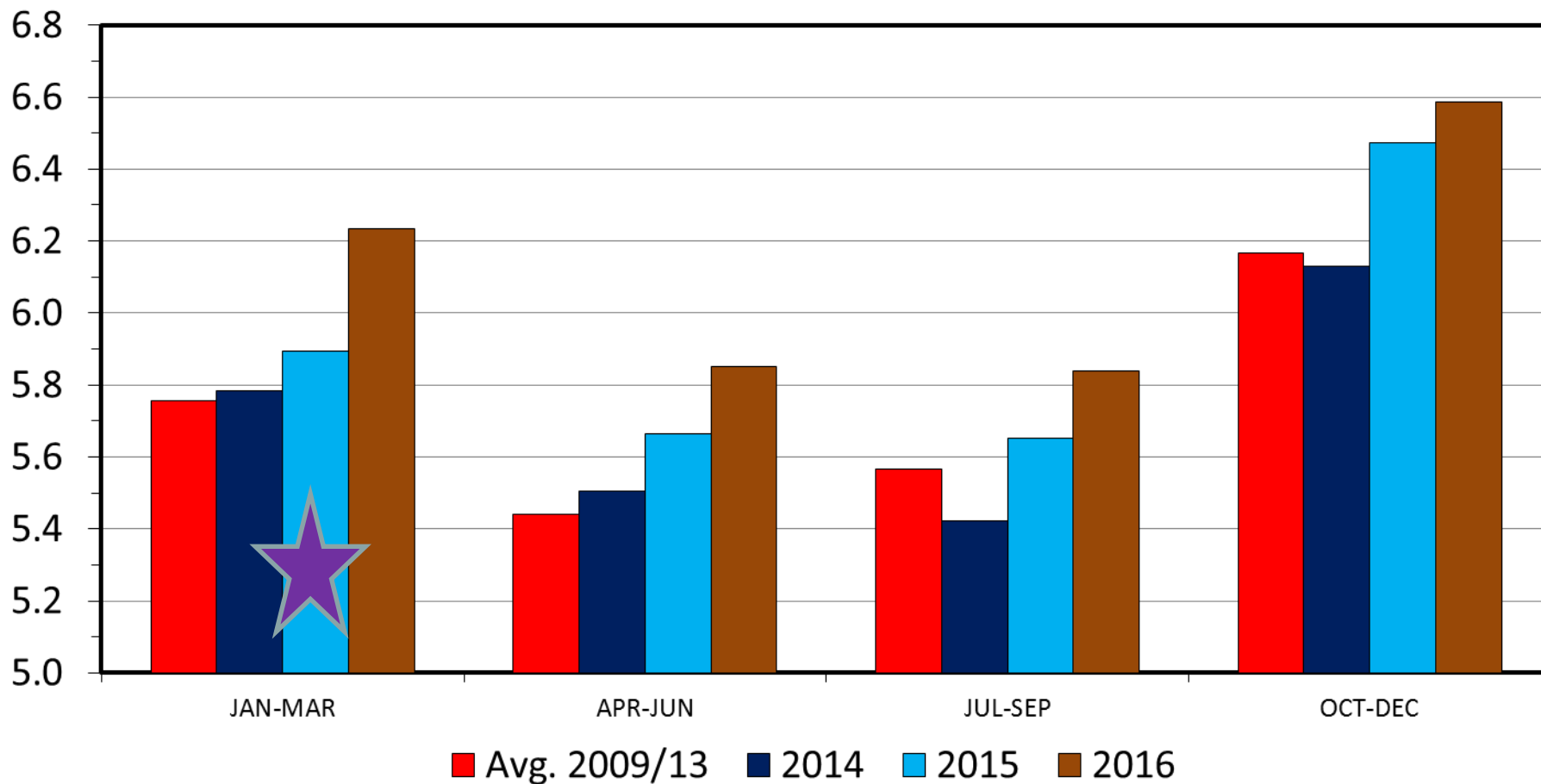


Recent & Upcoming Meat Production

COMMERCIAL PORK PRODUCTION

Quarterly

Bil. Pounds



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

Livestock Marketing Information Center

M-S-06
12/29/14

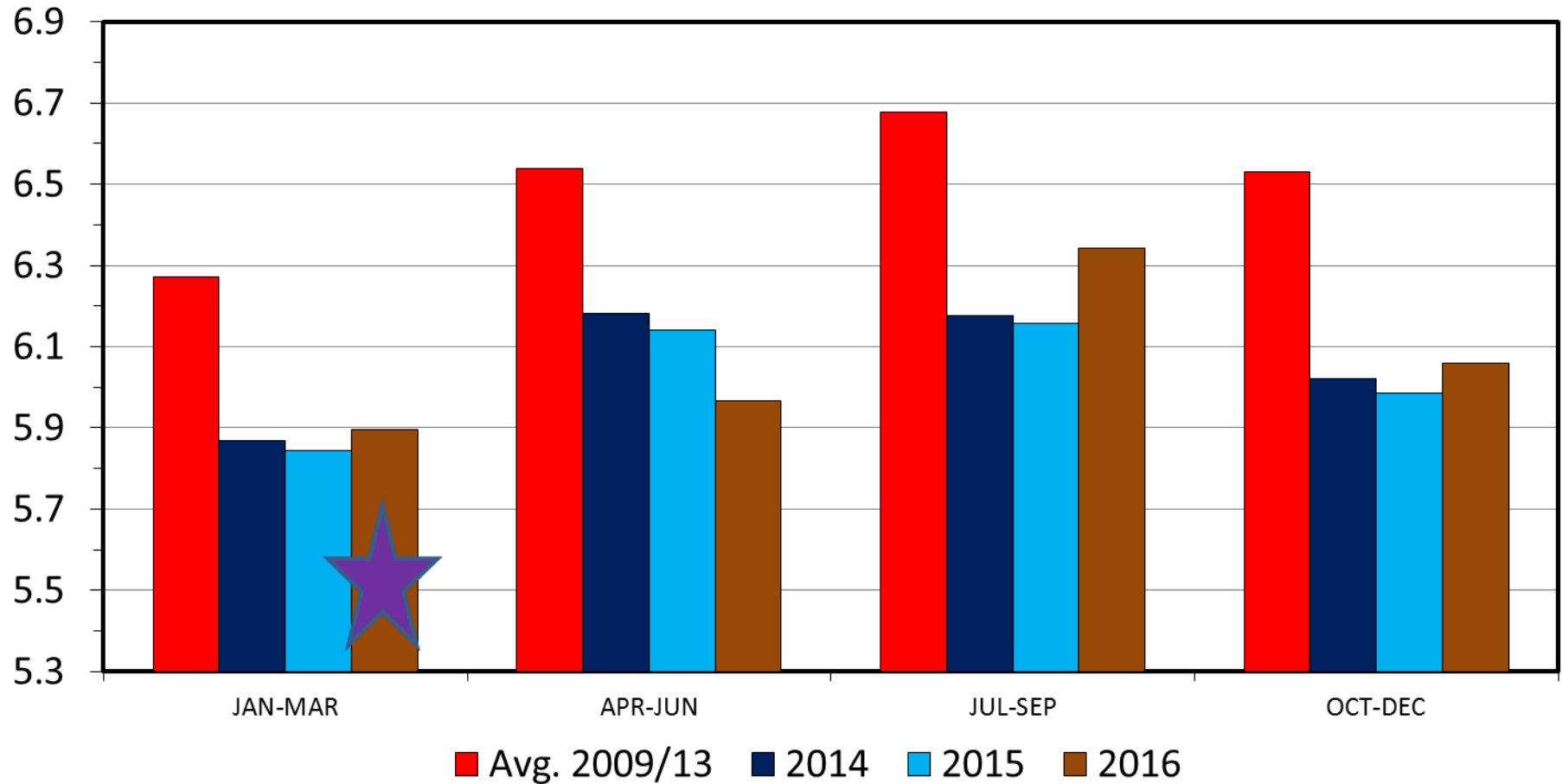
KANSAS STATE UNIVERSITY



COMMERCIAL BEEF PRODUCTION

Quarterly

Bil. Pounds



Data Source: USDA-NASS, Compiled & Analysis by LMIC
Livestock Marketing Information Center

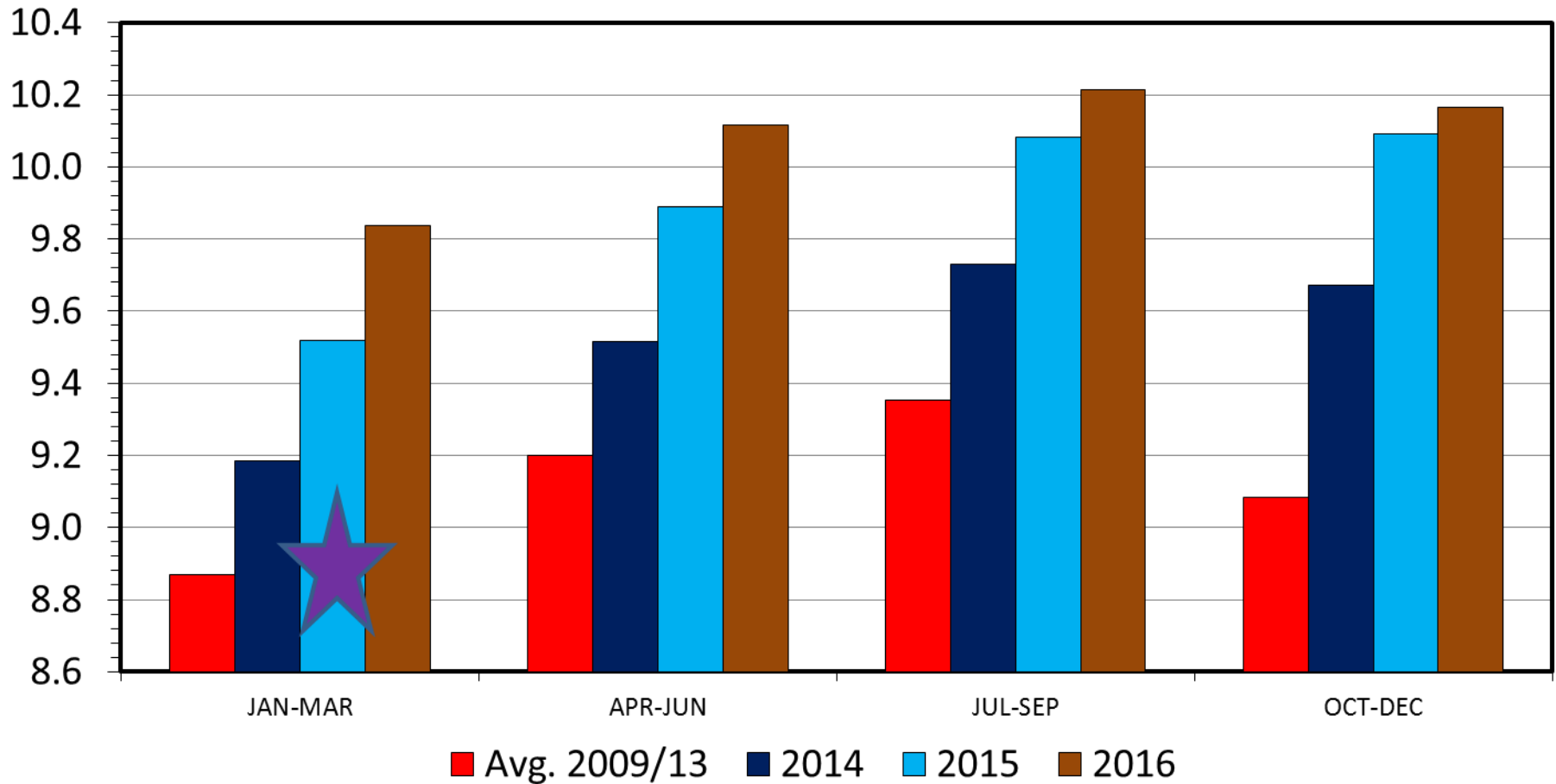
M-S-01
01/15/15



RTC BROILER PRODUCTION

Quarterly

Bil. Pounds



Data Source: USDA-NASS, Compiled & Analysis by LMIC
Livestock Marketing Information Center

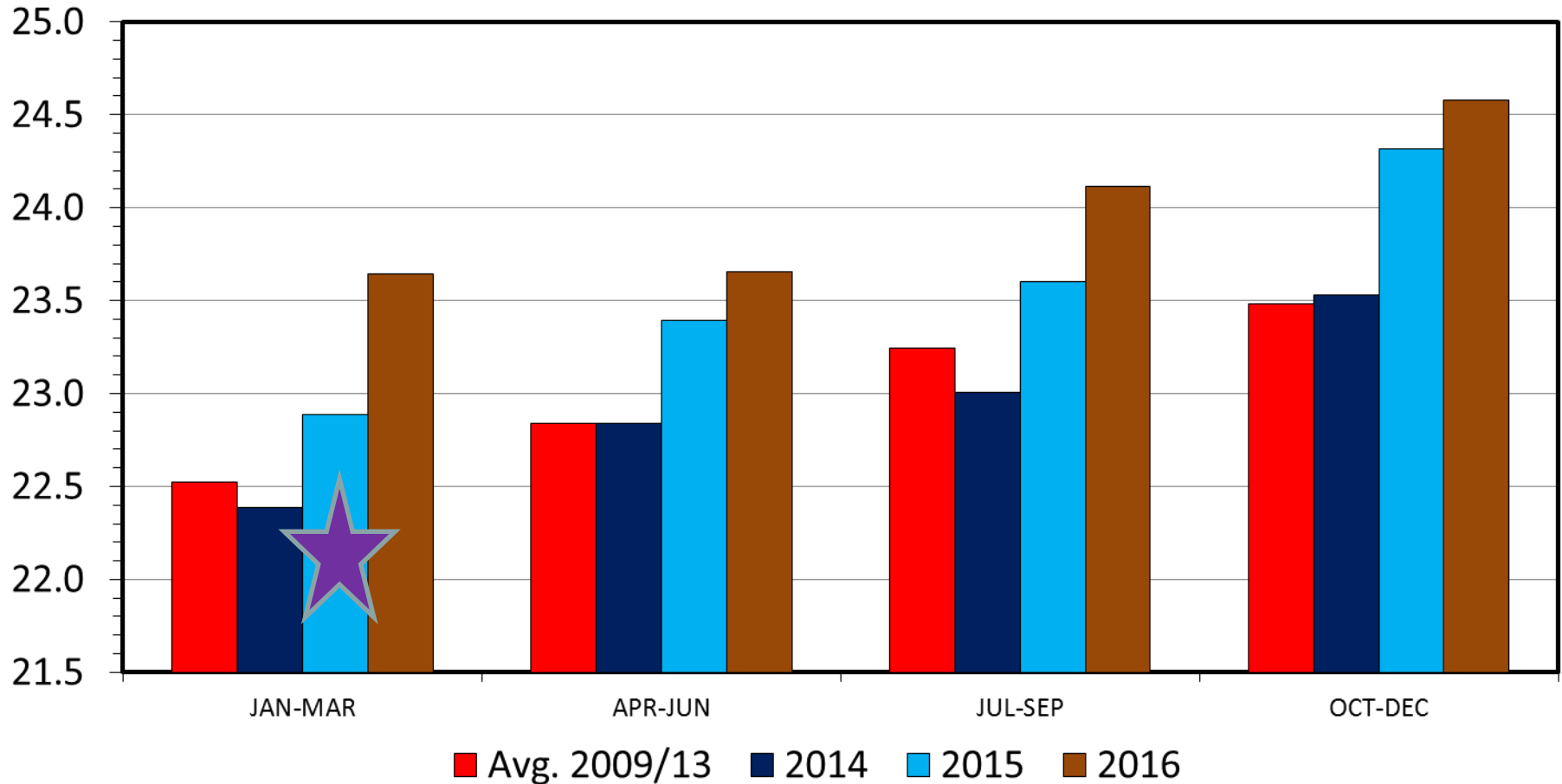
M-S-30
12/29/14



TOTAL RED MEAT & POULTRY PRODUCTION

Quarterly

Bil. Pounds



Data Source: USDA-NASS, Compiled & Analysis by LMIC
Livestock Marketing Information Center

M-S-31
12/29/14



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)



Key factors in 2015 for livestock & meat markets

CME DLR Dec. 31, 2014: <http://www.dailylivestockreport.com/documents/DLR%2012-31-2014.pdf>

1. Meat & Poultry Demand
 - 2014 prices reflect more than just tight supplies...
2. U.S. Economy
 - Lower gas prices & perhaps wage increases...
3. Broiler Sector Growth
 - 2nd half of 2014 expansion = MUCH more ckn in 15'
4. Number of pigs saved per litter
 - Breeding herd expanding; PEDv & PRRS impact?
5. Pasture and Range Conditions
 - Required for feasible beef herd expansion



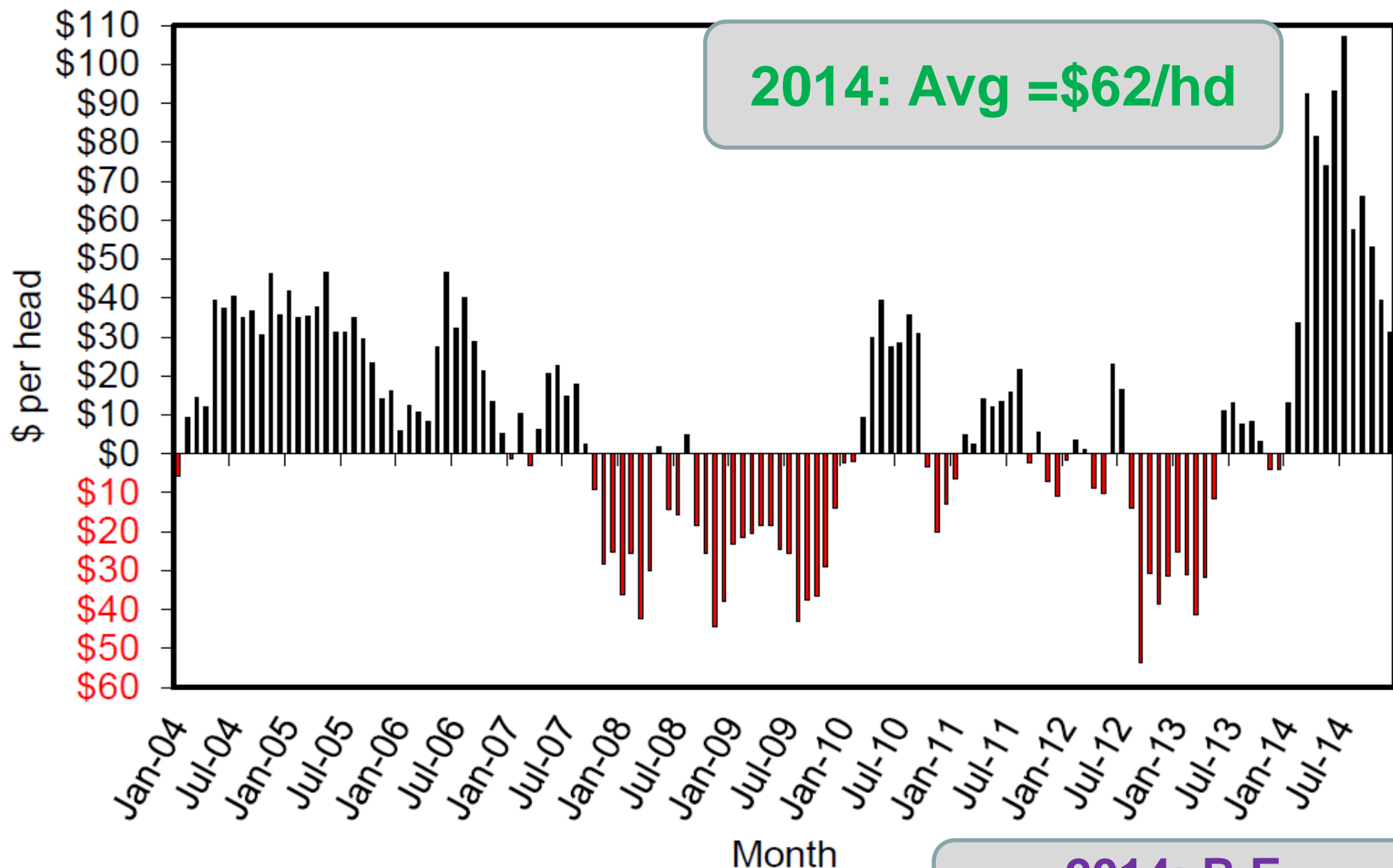
Overarching Pork Industry Economic Outlook

- Supplies
 - Been down; Substantial breeding herd expansion ongoing
 - Increase in Comm. Slaughter depends on PEDv & PRRS
- Demand
 - Strength “lost” in tight supply story
 - + Yr-over-Yr for 9 straight quarters
 - +6% in Q1.2014, +8% in Q2, +6% in Q3, & +11% in Q4
- Combined: “excitement and uncertainty”



Estimated Returns to Farrow to Finish, Iowa

Jan-04 thru December-14



2014: Avg = \$62/hd

2014: B.E.
\$/carcass cwt = \$73

Source: Lee Schulz, Iowa State University <http://www.econ.iastate.edu/estimated-returns/>

KANSAS STATE UNIVERSITY

USDA Quarterly Hogs & Pigs Report Dec. 23, 2014

Category	2013	2014	'14 as Pct of '13	Pre- Report Est's ¹	Actual minus Est.
Inventories on Dec 1					
All hogs and pigs	64775	66,050	102.0	101.5	0.5
Kept for breeding	5757	5,969	103.7	103.0	0.7
Kept for marketing	59018	60,082	101.8	101.3	0.5
Under 50 lbs.	18389	19,026	103.5	103.7	-0.2
50-119 lbs.	16080	16,630	103.4	102.7	0.7
120-179 lbs.	12576	12,635	100.5	99.4	1.1
180 lbs. and over	11972	11,791	98.5	97.5	1.0
Farrowings					
Sep-Nov sows farrowed	2,780	2,871	103.3	103.8	-0.5
Dec-Feb Intentions	2,763	2,870	103.9	103.8	0.1
Mar-May Intentions	2,810	2,900	103.2	103.9	-0.7
Sep-Nov Pig Crop	28,253	29,373	104.0	103.3	0.7
Sep-Nov pigs saved per litter	10.16	10.23	100.7	99.9	0.8

*Thousand head ** Thousand Litters

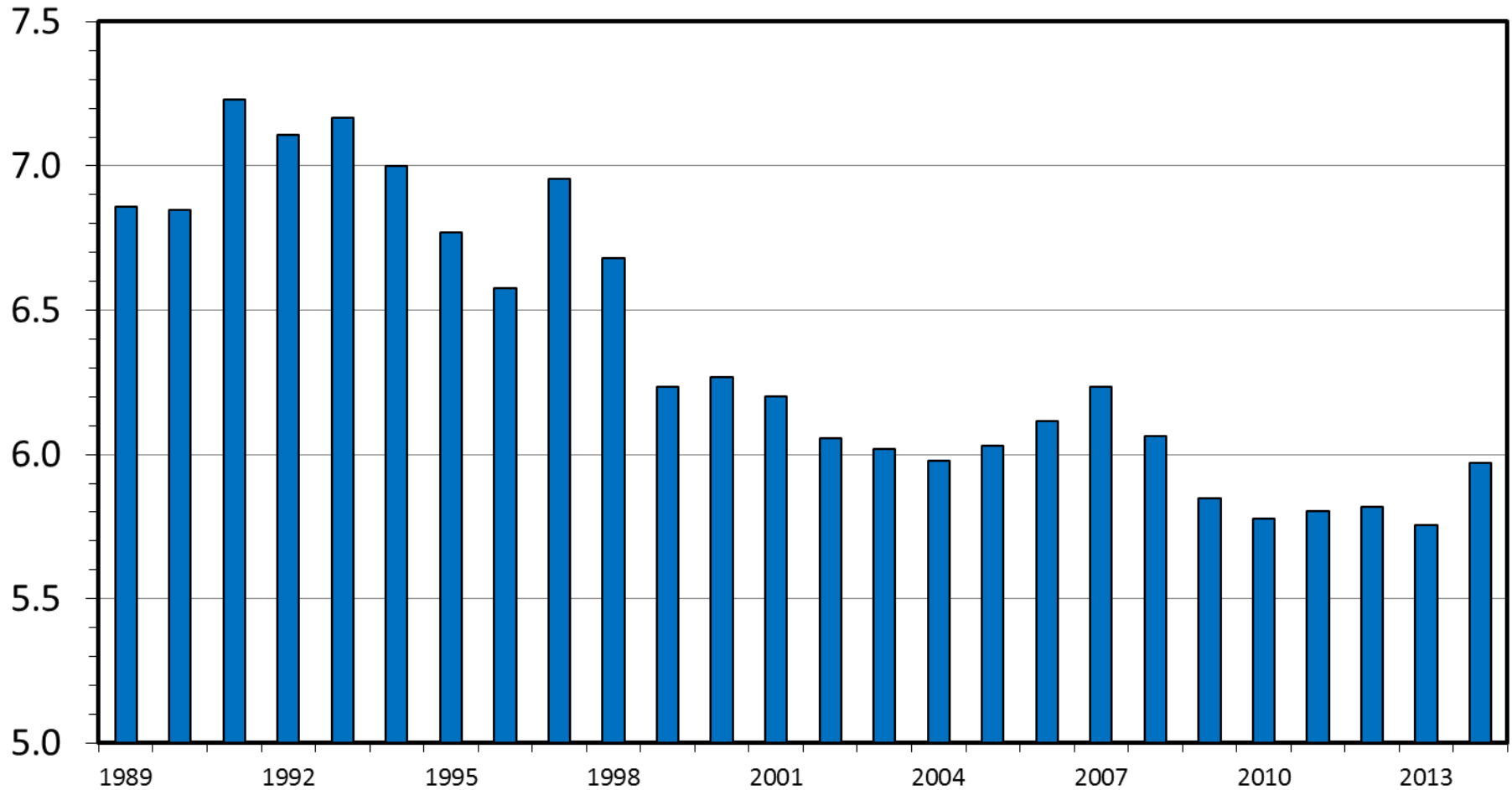
¹Source: Urner Barry



DECEMBER 1 HOG BREEDING HERD

U.S. Inventory

Mil. Head



Data Source: USDA-NASS

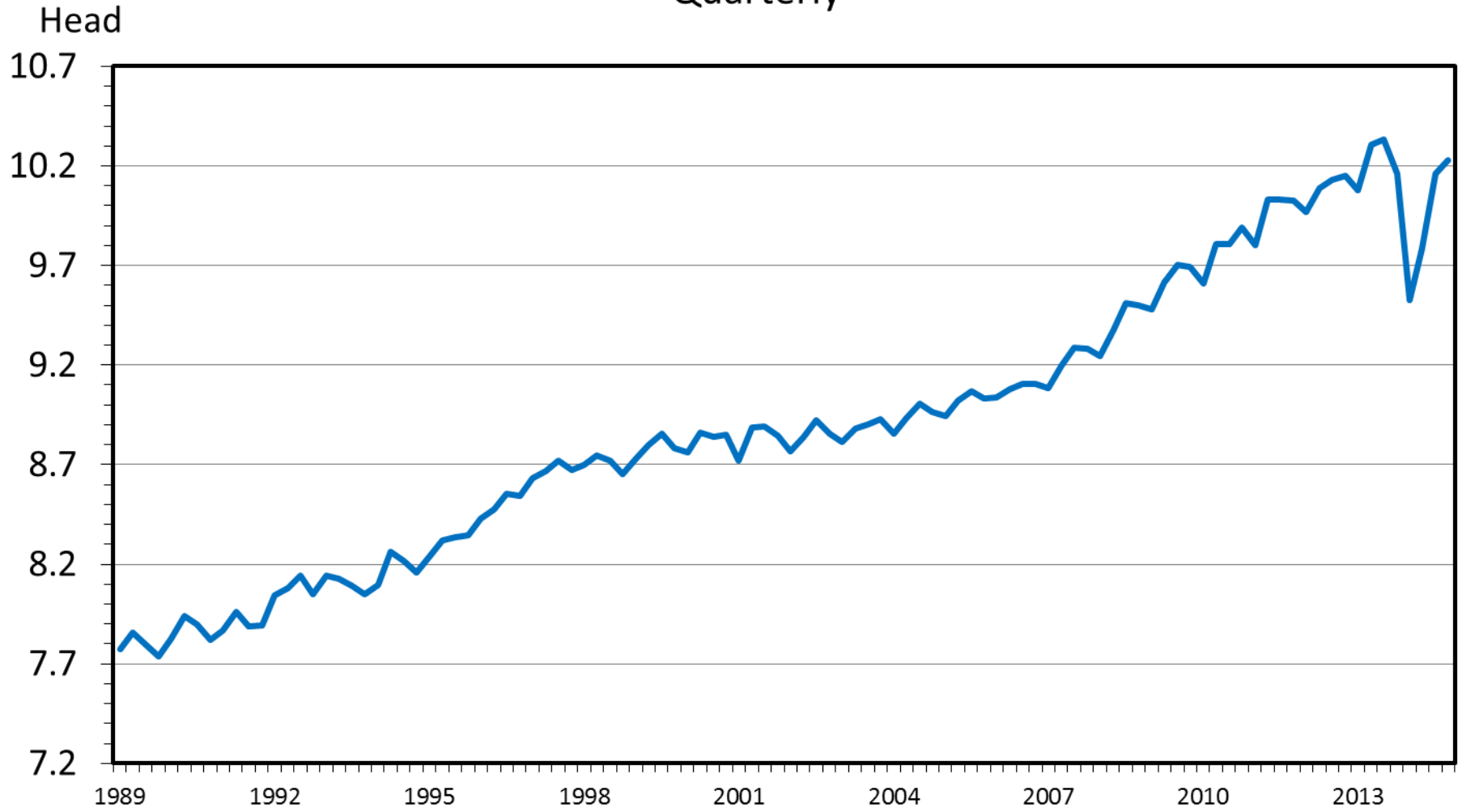
Livestock Marketing Information Center

H-N-09
12/23/14



PIGS PER LITTER

Quarterly



Data Source: USDA-NASS

Livestock Marketing Information Center

H-N-58
12/23/14

KANSAS STATE UNIVERSITY



Regional changes in Dec. 1st Breeding Herd (1,000 hd)

	2014 vs 2013	2014 vs 2009	2014 vs 2004
IOWA	40	-10	-50
NC	10	-50	-140
MN	10	0	-30
IL	0	20	80
OK	20	30	40
NE	15	35	50
MO	55	40	60
IND	10	10	10
KS	10	0	15
Rest of U.S.	42.2	43.8	-46.2
TOTAL	212.2	118.8	-11.2



Regional changes in Dec. 1st Breeding Herd (1,000 hd)

	2014 Shares of U.S.	2009 Shares of U.S.	2004 Shares of U.S.
IOWA	16.9%	17.4%	17.7%
NC	14.7%	15.9%	17.1%
MN	9.4%	9.6%	9.9%
IL	8.4%	8.2%	7.0%
OK	7.4%	7.0%	6.7%
NE	6.8%	6.3%	5.9%
MO	6.7%	6.2%	5.7%
IND	4.9%	4.8%	4.7%
KS	3.0%	3.1%	2.8%
Rest of U.S.	21.8%	21.5%	22.6%
TOTAL	100.0%	100.0%	100.0%



LMIC Pork Production and Price Quarterly Forecasts (12/31/14)

Sources: USDA/NASS; USDA/AMS Livestock Market News; Projections and Forecasts by LMIC

Year Quarter	Comm'l Slaughter	% Chg. from Year Ago	Average Carcass Weight	% Chg. from Year Ago	Comm'l Pork Production	% Chg. from Year Ago
2014						
I	27,134	-2.6%	213.33	2.7%	5,785	0.2%
II	25,574	-4.4%	215.33	4.4%	5,504	-0.2%
III	25,554	-7.6%	212.23	4.2%	5,423	-3.5%
IV	28,624	-3.9%	214.19	1.5%	6,131	-2.3%
Year	106,886	-4.6%	213.77	3.2%	22,844	-1.5%
2015						
I	27,403	1.0%	215.09	0.8%	5,894	1.9%
II	26,428	3.3%	214.36	-0.5%	5,665	2.9%
III	26,814	4.9%	210.79	-0.7%	5,652	4.2%
IV	30,177	5.4%	214.50	0.1%	6,473	5.6%
Year	110,822	3.7%	213.68	0.0%	23,684	3.7%
2016						
I	28,935	5.6%	215.48	0.2%	6,235	5.8%
II	27,241	3.1%	214.75	0.2%	5,850	3.3%
III	27,622	3.0%	211.39	0.3%	5,839	3.3%
IV	30,620	1.5%	215.06	0.3%	6,585	1.7%
Year	114,418	3.2%	214.17	0.2%	24,509	3.5%



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Ron Plain (Dec. 26):
Comm. Slaughter
+4.6% in 2015



LMIC Pork Production and Price Quarterly Forecasts (12/31/14)

Sources: USDA/NASS; USDA/AMS Livestock Market News; Projections and Forecasts by LMIC

Year Quarter	Per Capita Consumption	% Chg. from Year Ago	Prices National Wtd Avg Base	% Chg. from Year Ago
2014				
I	11.34	-1.0%	91.44	12.8%
II	10.97	-2.6%	111.84	25.2%
III	11.15	-2.3%	110.03	15.5%
IV	12.81	0.9%	89.90	8.3%
Year	46.27	-1.2%	100.80	16.1%
2015				
I	11.75	3.6%	86-89	-4.3%
II	11.31	3.2%	89-93	-18.6%
III	11.32	1.5%	86-91	-19.6%
IV	13.02	1.7%	77-83	-11.0%
Year	47.41	2.5%	85-89	-13.9%
2016				
I	12.25	4.2%	78-85	-6.9%
II	11.53	1.9%	81-89	-6.6%
III	11.49	1.6%	80-88	-5.1%
IV	13.05	0.2%	72-82	-3.8%
Year	48.32	1.9%	79-85	-5.7%



LMIC Pork Production and Price Quarterly Forecasts (12/31/14)

Sources: USDA/NASS; USDA/AMS Livestock Market News; Projections and Forecasts by LMIC

Year Quarter	Per Capita Consumption	% Chg. from Year Ago	Prices National Wtd Avg Base	% Chg. from Year Ago
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II	10.97	-2.6%	111.84	25.2%
III	11.15	-2.3%	110.03	15.5%
IV	12.81	0.9%	89.90	8.3%
Year	46.27	-1.2%	100.80	16.1%
2015				
I			86-89	-4.3%
II			89-93	-18.6%
III			86-91	-19.6%
IV			77-83	-11.0%
Year	47.1		85-89	-13.9%
2016				
I	12.25	4.2%	78-85	-6.9%
II	11.53	1.9%	81-89	-6.6%
III	11.49	1.6%	80-88	-5.1%
IV	13.05	0.2%	72-82	-3.8%
Year	48.32	1.9%	79-85	-5.7%

Ron Plain (Dec. 26):
2015 Avg Price:
\$84/cwt



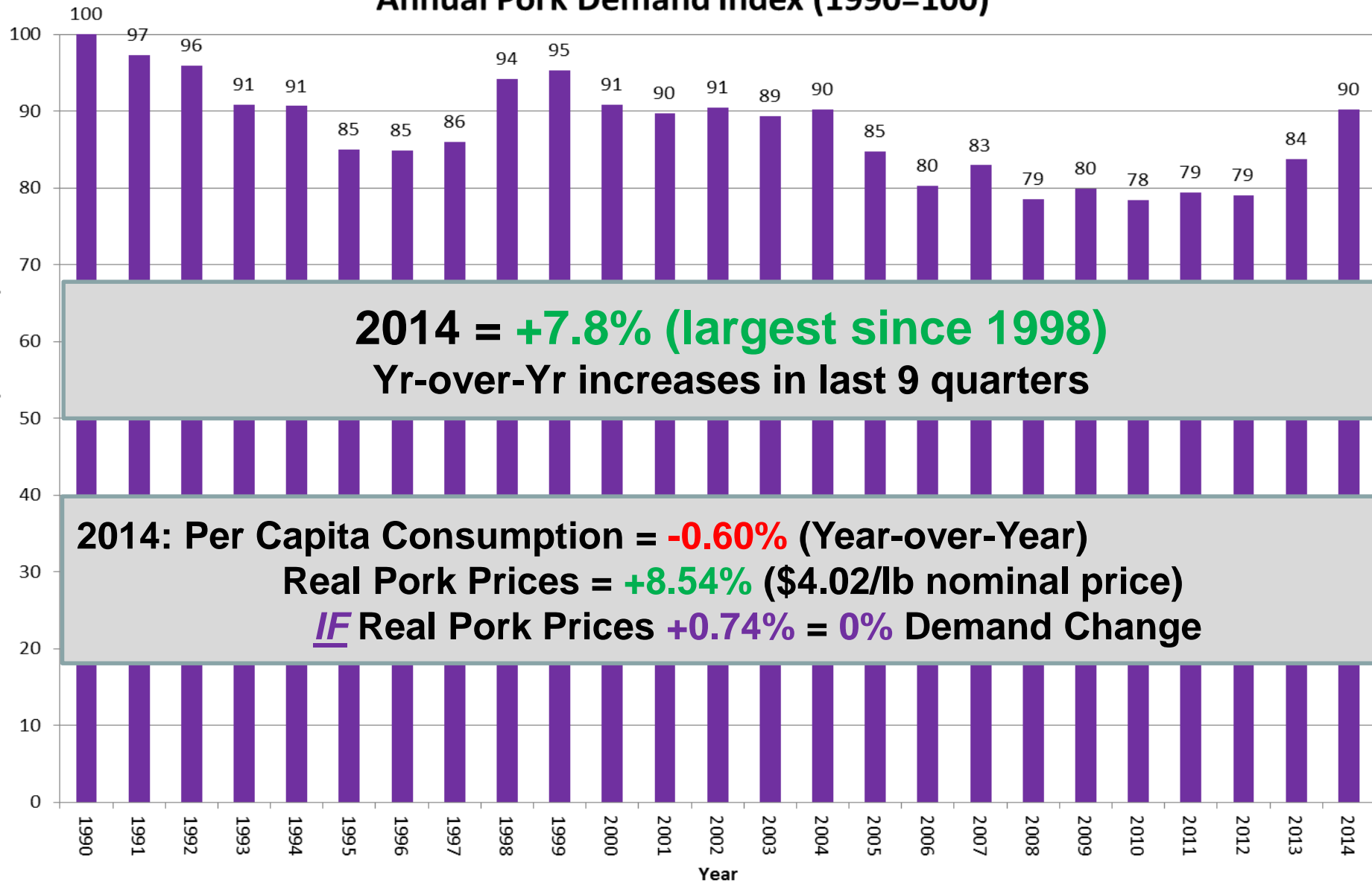
Meat Demand

- *Critically Important, Yet Often Confused*
 - *Demand strength*
 - *reflects consumer valuation of meat*
 - *underlies total \$ available for the industry*
 - » *drives prices and profitability for all*
 - ***“To Fix It You Have to Understand It”***
 - *Wayne Purcell, 1998 (<http://www.naiber.org/Publications/RILP/primer1.pdf>)*



Annual Pork Demand Index (1990=100)

Demand Index (1990=100)



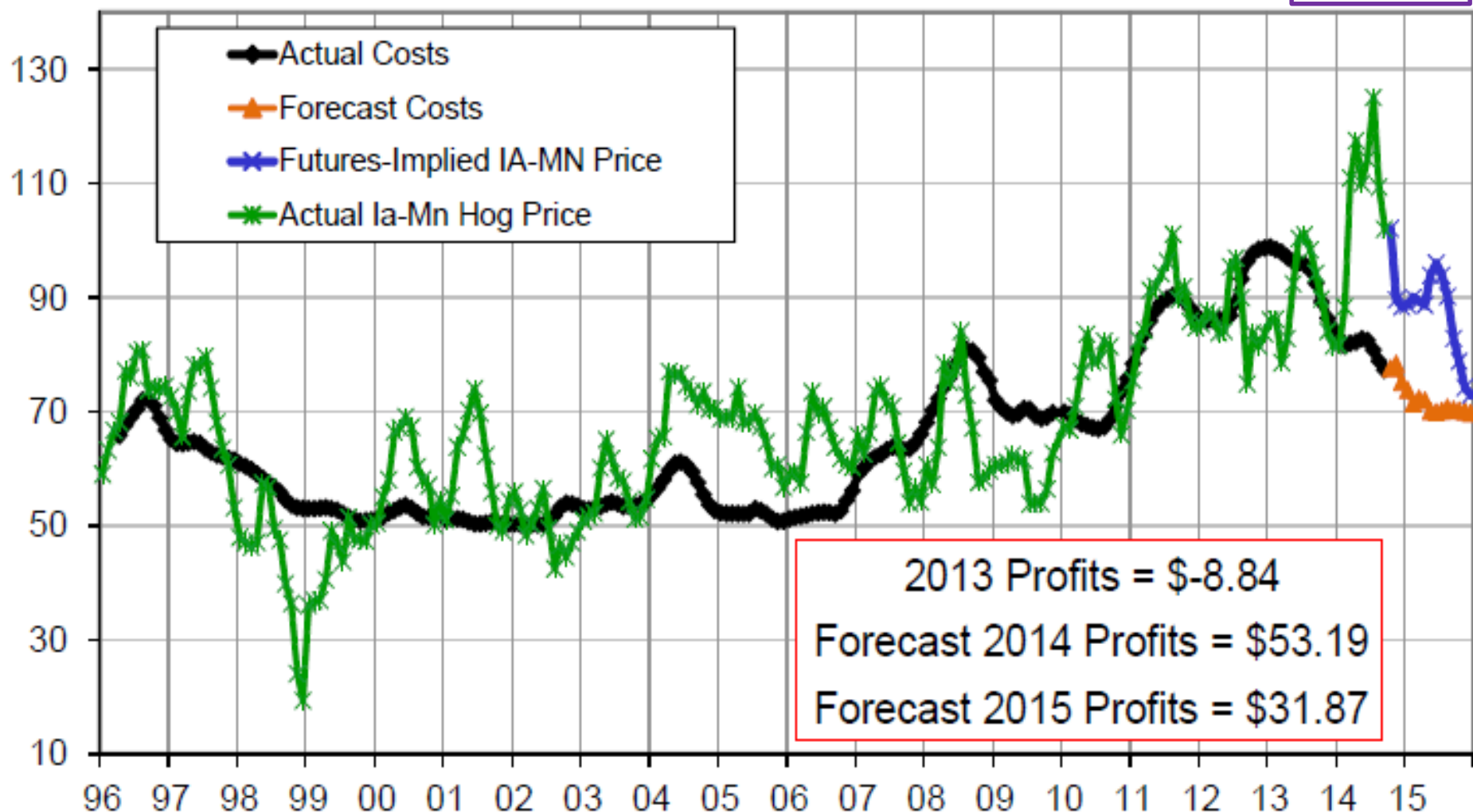
Source: Glynn T. Tonsor, Kansas State University, Jan. 2015

<http://www.agmanager.info/livestock/marketing/>

HOG PRODUCTION COSTS* AND PRICES

\$/cwt carcass

11/4/2014



*Based on relationship between ISU Estimated Costs & Returns data and historic Omaha corn and Decatur soybean meal prices

SOURCE: CME DLR (11.4.2014): <http://www.dailylivestockreport.com/documents/DLR%2011-4-2014.pdf>

HOG PRODUCTION COSTS* AND PRICES

\$/cwt carcass

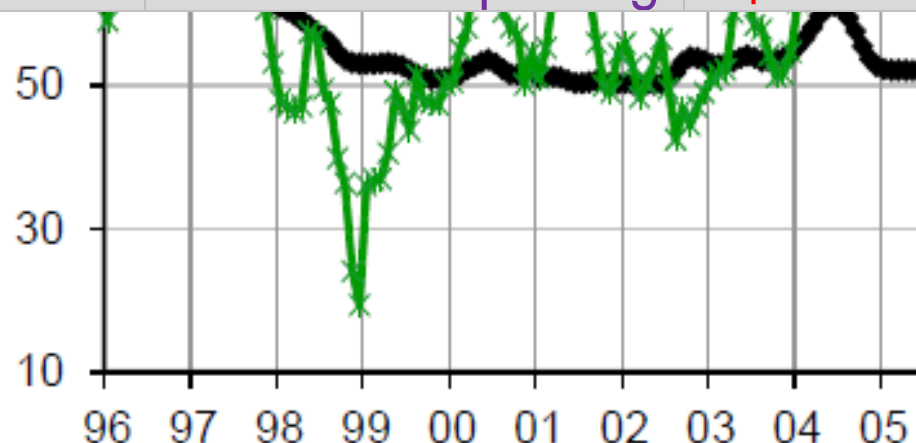
11/4/2014

Corn Futures Prices (\$/bu)

	11/4/2014	2/3/2015	Change
MAR	\$3.77	\$3.74	-\$0.03
MAY	\$3.86	\$3.83	-\$0.03
JUL	\$3.93	\$3.90	-\$0.03
SEP	\$3.99	\$3.97	-\$0.02
DEC	\$3.64	\$4.06	\$0.42
	Simple Avg:		\$0.06

LH Futures Prices (\$/cwt)

	11/4/2014	2/3/2015	Change
FEB	\$87.80	\$66.80	-\$21.00
APR	\$88.70	\$71.08	-\$17.62
MAY	\$90.50	\$79.35	-\$11.15
JUN	\$93.80	\$83.15	-\$10.65
JUL	\$92.75	\$83.85	-\$8.90
AUG	\$90.45	\$83.75	-\$6.70
OCT	\$78.07	\$73.10	-\$4.97
DEC	\$87.97	\$69.30	-\$18.67
	Simple Avg:		-\$12.46



Forecast 2014 Profits = \$53.19

Forecast 2015 Profits = \$31.87

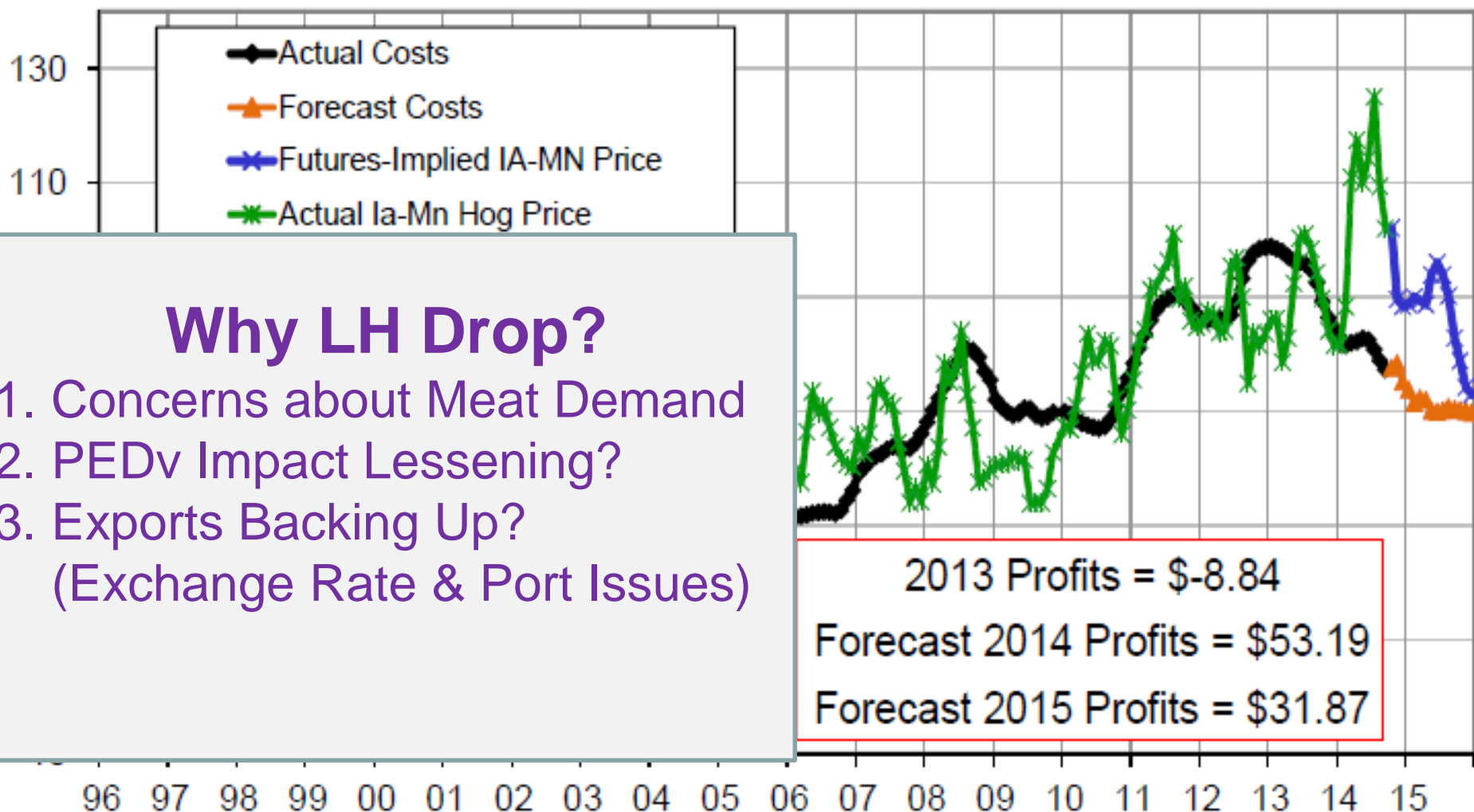
*Based on relationship between ISU Estimated Costs & Returns data and historic Omaha corn and Decatur soybean meal prices

SOURCE: CME DLR (11.4.2014): <http://www.dailylivestockreport.com/documents/DLR%2011-4-2014.pdf>

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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
Pork long-term projections									
Item	Units	2013	2014	2015	2016	2017	2018	2019	2024
Commercial production	Mil. lbs.	23,187	22,662	23,620	24,664	25,052	25,402	25,681	26,808
Change from previous year	Percent	-0.3	-2.3	4.2	4.4	1.6	1.4	1.1	1.0
Total production	Mil. lbs.	23,200	22,675	23,633	24,677	25,065	25,415	25,694	26,821
Imports	Mil. lbs.	880	973	900	900	913	926	939	1,004
Total supply	Mil. lbs.	24,705	24,266	25,113	26,182	26,578	26,941	27,233	28,425
Exports	Mil. lbs.	4,992	5,066	5,250	5,375	5,500	5,600	5,675	6,050
Ending stocks	Mil. lbs.	618	580	605	600	600	600	600	600
Total consumption	Mil. lbs.	19,095	18,620	19,258	20,207	20,478	20,741	20,958	21,775
Per capita, retail weight	Pounds	46.8	45.3	46.6	48.5	48.8	49.1	49.3	49.5
Change from previous year	Percent	1.9	-3.2	2.7	4.2	0.6	0.6	0.4	0.2



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
Pork long-term projections									
Item	Units	2013	2014	2015	2016	2017	2018	2019	2024
Prices:									
Hogs, farm	\$/cwt	67.22	77.98	66.96	59.26	56.44	54.59	53.63	55.65
National base, live equivalent	\$/cwt	64.05	76.60	65.75	57.54	54.79	53.00	52.07	54.03
Feed price ratio:									
Hog-corn	Ratio	9.8	17.5	19.1	17.4	16.1	15.6	15.3	15.0
Hog inventory,									
December 1, previous year	1,000 head	66,224	64,775	65,400	66,916	67,480	67,987	68,393	70,030



Other “Big Issues” to Note

- Industry Physical Capacity vs. Herd Size
- MCOOL
- Poultry Trade Bans (NW Wild Birds AI)
- Mixed impact of lower oil prices
- Market hog price discovery
- Disconnects in voting & buying behavior
- “Science working” ~~≠~~ Public acceptance



Other “Big Issues” to Note

- Industry Physical Capacity vs. Herd Size
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- Mixed impact of lower oil prices
- Market hog price discovery
- Disconnects in voting & buying behavior
- “Science working” ~~≠~~ Public acceptance
 - ***Combined = MORE Uncertainty & LESS Interest in Expansion***



Comparative Advantage: Self Assessment

- Necessary for each successful operation
 - Long-term economic profits = \$0/hd
- Necessary for U.S. as a whole
 - Global demand growth critical for U.S. producers
 - *Are we ready to leverage opportunity?*



Context on Global Comparative Advantage Impacts

- Do pork importers “question” production practices like U.S. consumers/customers?

Pork imports (thousand metric tons, carcass wt.), long-term projections (as of Nov. 2013)

	2013	2023	% Change
Japan	1240	1330	7%
China	750	1194	59%
Hong Kong	400	487	22%
South Korea	400	544	36%
Russia	900	812	-10%
Mexico	785	1097	40%
Central Am./Car.	118	185	57%
Canada	235	288	23%
US	389	443	14%
Major Importers	5217	6379	22%

Context on Global Comparative Advantage Impacts

- How do pork exporters compare on production practice “issues?”

Pork exports (thousand metric tons, carcass wt.), long-term projections (as of Nov. 2013)

	2013	2023	% Change	2013 Export Shares	2023 Export Shares
Brazil	600	661	10%	9%	8%
Canada	1245	1350	8%	19%	17%
Mexico	110	151	37%	2%	2%
EU	2204	2423	10%	33%	31%
China	250	383	53%	4%	5%
US	2292	2901	27%	34%	37%
Major Exporters	6701	7869	17%		

Source: USDA OCE, Nov. 2013 (<http://www.ers.usda.gov/publications/oce-usda-agricultural-projections/oce141.aspx>)



Reasons to Be Bearish

- Retail meat prices are “too high”
- Access to limited packer space in 2016?
- “Real expansion” has yet to hit
 - Jim Long, Genesis: New sow units yet to produce
- Export challenges may persist

➤ **Uncertainty is “too great”**



Reasons to Be Bullish

- Demand: 2014 was great year for beef & pork
 - PEDv/PRRS: “renewal” would support prices
 - China: massive sow liquidation & + demand
 - Beef: ongoing low 2015 supplies
 - Perspective aligns w/ NPB Strategic Plan
 - Build Consumer Trust, Drive Sustainable Prod., Grow Consumer Demand
- **Individually have comparative advantage**



Take-Home Summary Points

- Animal/Meat-to-Feed Price Ratios
 - Attractive Ratios = Multi-Year Period of Industry Expansion
- Global Meat Demand & U.S. Comparative Advantage
 - Long list of reasons to be bullish (w/ ongoing challenges)
- Expanding Supply & Sound L.Term Demand Signals =
EXCITING TIME FOR MEAT & LIVESTOCK SECTOR
- “Not your father’s world anymore”
 - Know & leverage your comparative advantage



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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