The Growing Hog Industry in Iowa

Dermot Hayes

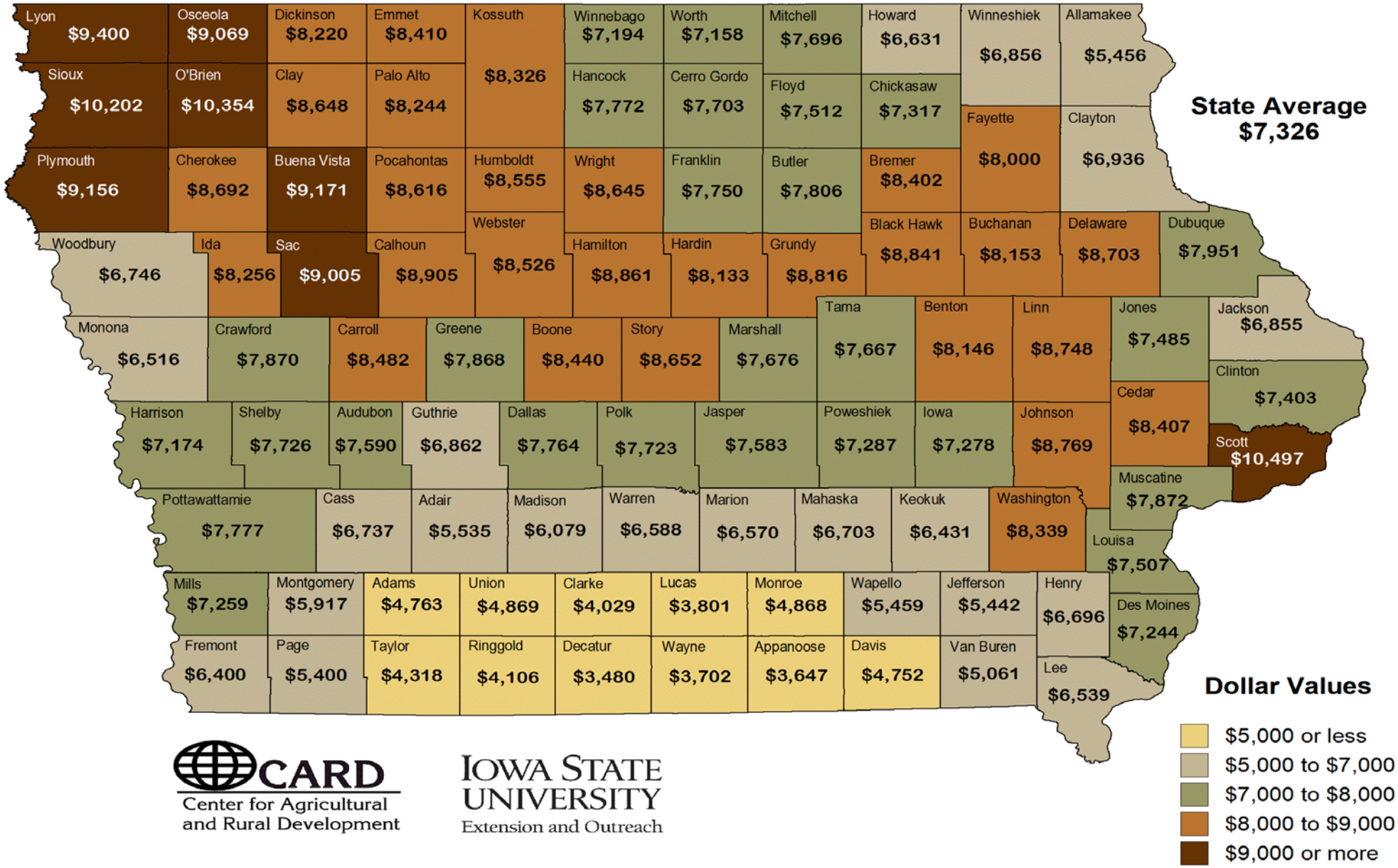
91th Annual

Soil Management and Land Valuation Conference

Iowa State University

Benton Auditorium, Scheman Building

Wednesday, May 16, 2018



CARD
Center for Agricultural and Rural Development

IOWA STATE UNIVERSITY
Extension and Outreach

Committee of 82, Moneyball analysis

- How did some rural counties avoid economic decline
- Counties where livestock receipts grew by more than 10% above the mean experienced an income increase of approximately one million dollars
- Agriculturally dependent counties that did not experience an increase in livestock production experienced a loss in county income of almost seventeen million dollars
- In short, livestock production is an effective way for counties to offset and even reverse the economic decline that occurs due to increases in farm size and improvements in technology.

USDA Quarterly Hogs and Pigs Report – United States
March 29, 2018

	United States				Iowa		
	2017	**2018**	**2018 as % of 2017**		**2017**	**2018**	**2018 as % of 2017**
Inventories on Mar 1 *							
All hogs and pigs	71,545	73,230	102.4		21,600	22,600	104.6
Kept for breeding	6,110	6,179	101.1		1,000	1,020	102.0
Market	65,435	67,051	102.5		20,600	21,580	104.8
Under 50 pounds	20,887	21,447	102.7		5,300	5,590	105.5
50-119 pounds	18,102	18,549	102.5		6,440	6,720	104.3
120-179 pounds	13,786	14,105	102.3		5,270	5,340	101.3
180 pounds and over	12,660	12,949	102.3		3,590	3,930	109.5
Farrowing **							
Sep – Nov sows farrowed	3,046	3,109	102.1		510	560	109.8
Dec – Feb intentions	2,986	3,070	102.8		510	550	107.8
Mar – May intentions	3,014	3,083	102.3		530	560	105.7
Sep – Nov pigs per litter	10.63	10.74	101.0		10.75	11.00	102.3
Sep – Nov pig crop *	32,372	33,399	103.2		5,483	6,160	112.3

* 1,000 head, ** 1,000 litters Data Source: USDA-NASS estimates.

LMIC Pork Production and Price Quarterly Forecasts (4/22/18)

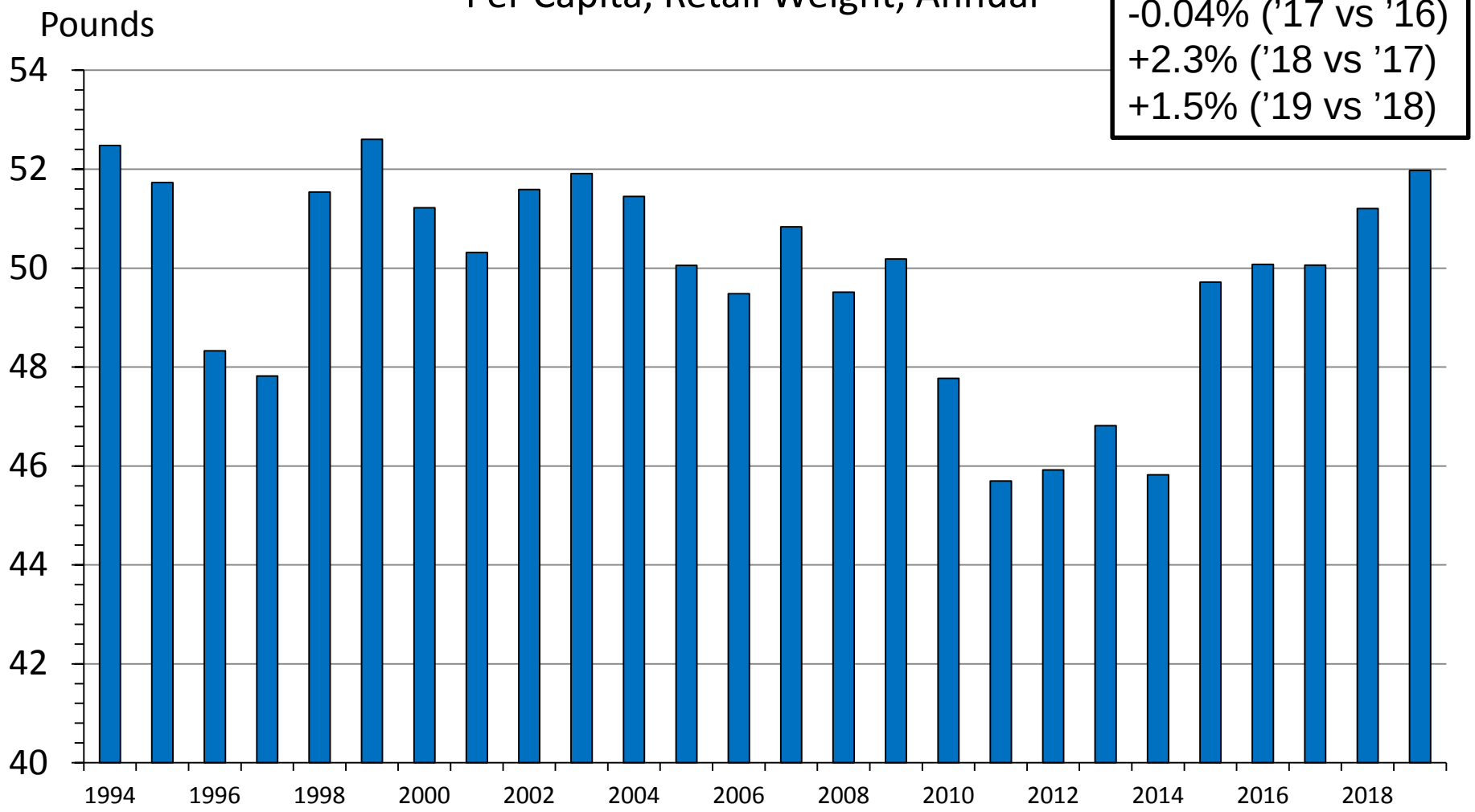
Sources: USDA/NASS; USDA/AMS Livestock Market News; Projections and Forecasts by LMIC

Year Quarter	Comm'l Slaughter	% Chg. Year Ago	Avg Carcass Weight	% Chg. Year Ago	Comm'l Pork Production	% Chg. Year Ago
2016	**(1,000 hd)**		**(lbs)**		**(mil. Lbs)**	
I	29,262	1.9	213	-0.9	6,230	1.1
II	28,116	1.0	213	-0.2	5,963	0.6
III	29,323	3.0	208	-0.6	6,100	2.4
IV	31,539	3.8	211	-0.6	6,648	3.0
Year	118,240	2.4	211	-0.6	24,941	1.8
2017						
I	30,178	3.1	213	-0.2	6,410	2.9
II	29,165	3.7	211	-0.9	6,137	2.9
III	29,967	2.2	209	0.2	6,240	2.3
IV	32,007	1.5	213	0.6	6,796	2.2
Year	121,317	2.6	211	-0.1	25,584	2.6
2018						
I	31,075	3.0	214	0.6	6,645	3.7
II	30,093	3.2	212	0.8	6,392	4.2
III	30,873	3.0	209	0.3	6,461	3.5
IV	33,489	4.6	213	0.3	7,142	5.1
Year	125,530	3.5	212	0.5	26,640	4.1
2019						
I	31,414	1.1	215	0.3	6,742	1.5
II	30,732	2.1	213	0.5	6,560	2.6
III	32,060	3.8	210	0.4	6,733	4.2
IV	34,251	2.3	214	0.2	7,317	2.5
Year	128,457	2.3	213	0.3	27,352	2.7

US PORK CONSUMPTION

Per Capita, Retail Weight, Annual

+8.5% (‘15 vs ‘14)
+0.7% (‘16 vs ‘15)
-0.04% (’17 vs ’16)
+2.3% (’18 vs ’17)
+1.5% (’19 vs ’18)



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

Livestock Marketing Information Center

M-C-14
04/12/18

USDA Long-term Pork Projections, February 2018

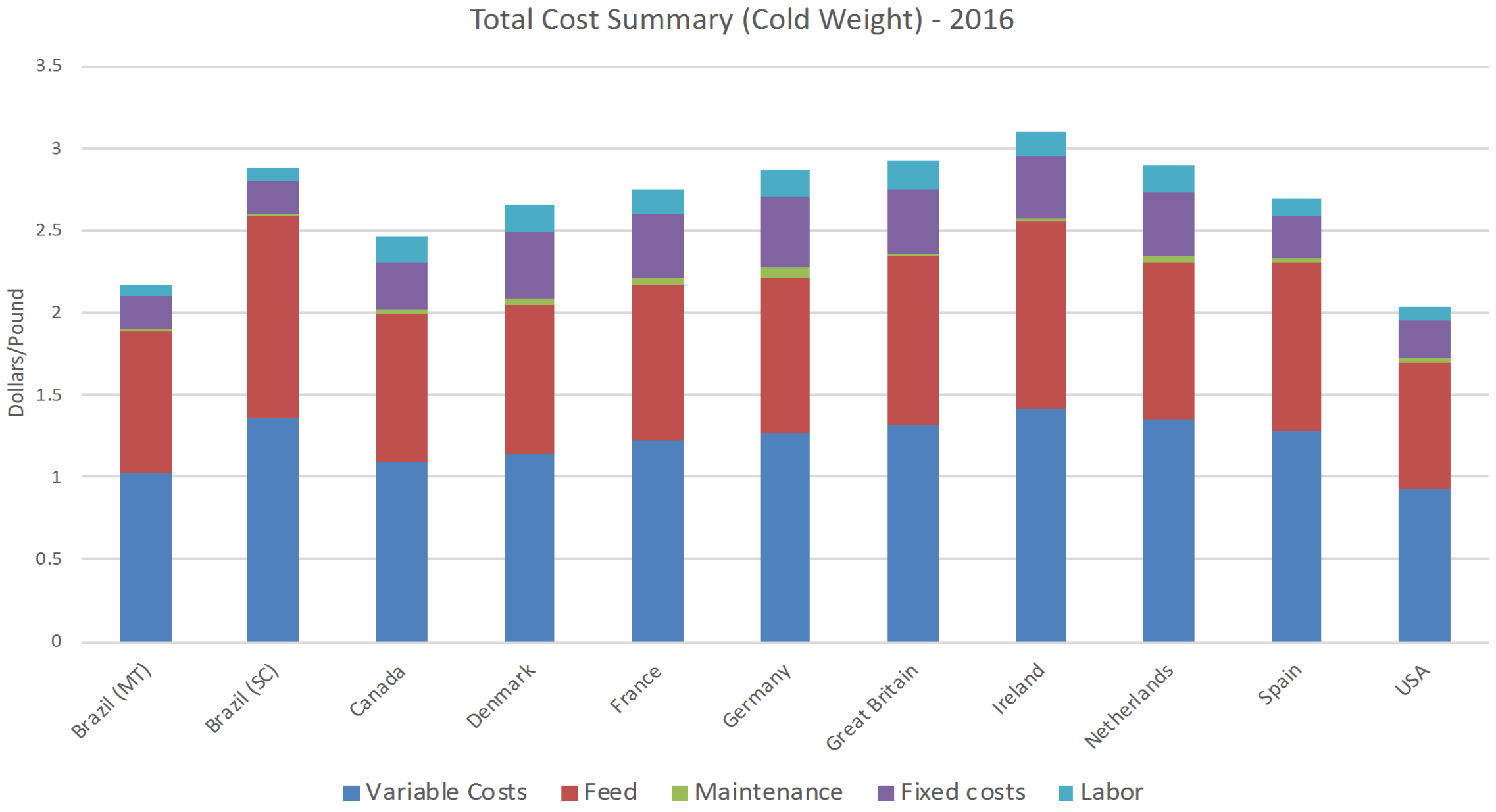
https://www.usda.gov/oce/commodity/projections/

Item	Units	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027
Beginning stocks	Mil. lbs.	590	507	630	660	660	665	670	675	685	695	705	715
Commercial production	Mil. lbs.	24,941	25,740	26,925	27,170	27,307	27,467	27,669	27,926	28,242	28,548	28,832	29,128
Chg from previous yr	Percent	1.8	3.2	4.6	0.9	0.5	0.6	0.7	0.9	1.1	1.1	1.0	1.0
Farm production	Mil. lbs.	16	16	16	16	16	16	16	16	16	16	16	16
Total production	Mil. lbs.	24,957	25,756	26,941	27,186	27,323	27,483	27,685	27,942	28,258	28,564	28,848	29,144
Imports	Mil. lbs.	1,091	1,113	1,000	1,032	1,038	1,044	1,051	1,061	1,073	1,085	1,096	1,107
Total supply	Mil. lbs.	26,638	27,376	28,571	28,878	29,021	29,192	29,406	29,678	30,016	30,344	30,649	30,966
Exports	Mil. lbs.	5,239	5,588	5,900	6,017	6,135	6,252	6,369	6,487	6,604	6,721	6,839	6,956
Ending stocks	Mil. lbs.	507	630	660	660	665	670	675	685	695	705	715	725
Total consumption	Mil. lbs.	20,892	21,158	22,011	22,201	22,221	22,270	22,362	22,506	22,717	22,918	23,095	23,285
Per capita, retail weight	Pounds	50.1	50.4	52.1	52.2	51.9	51.7	51.5	51.6	51.7	51.8	51.9	52
Change from previous yr	Percent	0.8	0.6	3.3	0.2	-0.6	-0.4	-0.2	0.0	0.3	0.2	0.2	0.2
Prices:													
Hogs, farm	$/cwt	49.64	52.31	48.07	45.23	45.83	47.02	48.06	48.68	48.93	49.27	49.64	49.97
National base, live equivalent	$/cwt	46.16	49.01	45.00	43.08	43.65	44.78	45.77	46.36	46.60	46.92	47.28	47.59
National base, lean equivalent	$/cwt	62.38	66.23	60.81	58.22	58.99	60.51	61.85	62.65	62.97	63.41	63.89	64.31
Feed price ratio: Hog-corn	Ratio	13.8	15.6	15.0	13.7	13.7	14.0	14.1	14.3	14.2	14.1	14.2	14.1
Hog inventory, December 1, previous yr	1,000 head	68,919	71,525	72,125	72,490	72,695	72,933	73,236	73,619	74,090	74,547	74,971	75,412

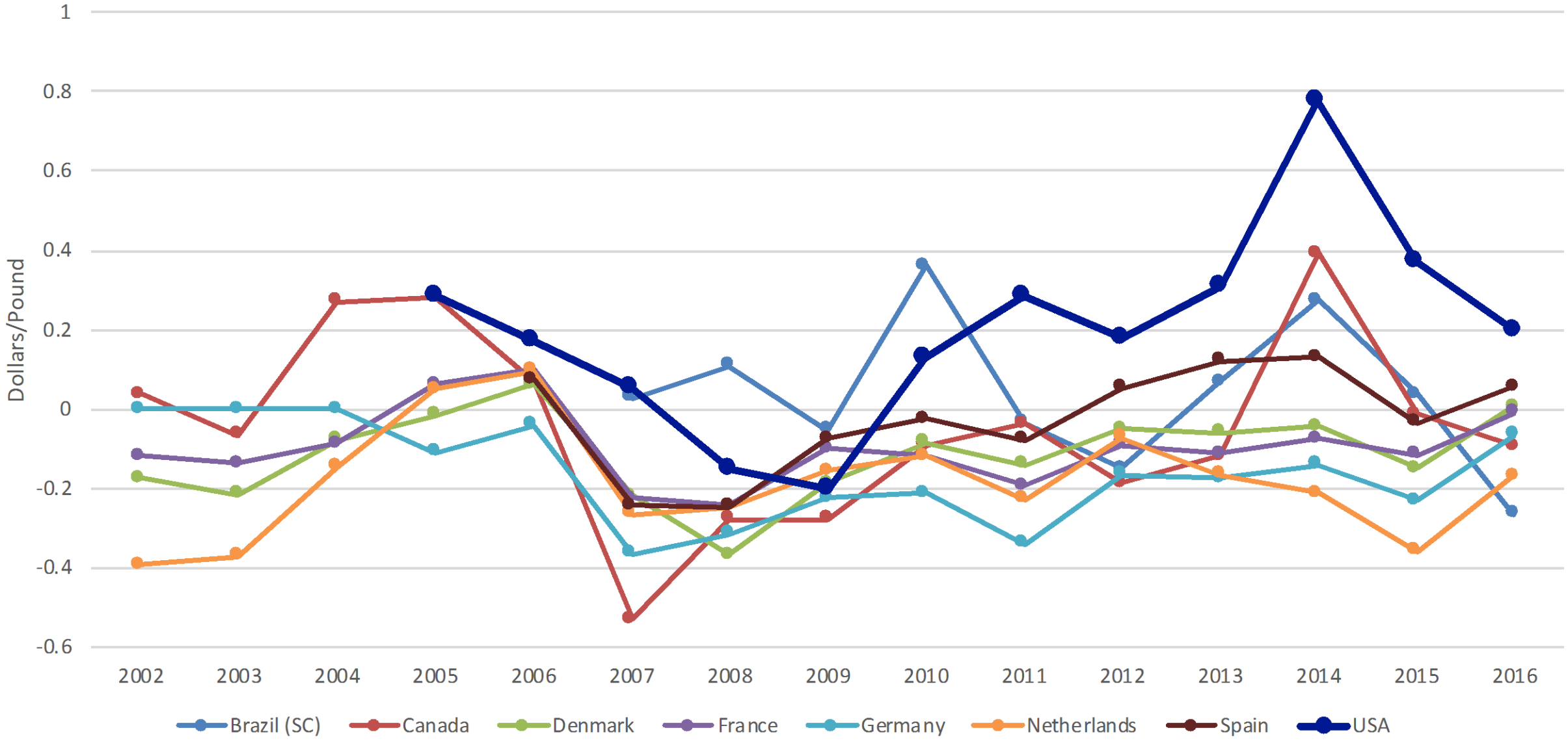
Commercial Prod.
2017 to 2022: +7%
2017 to 2027: +13%

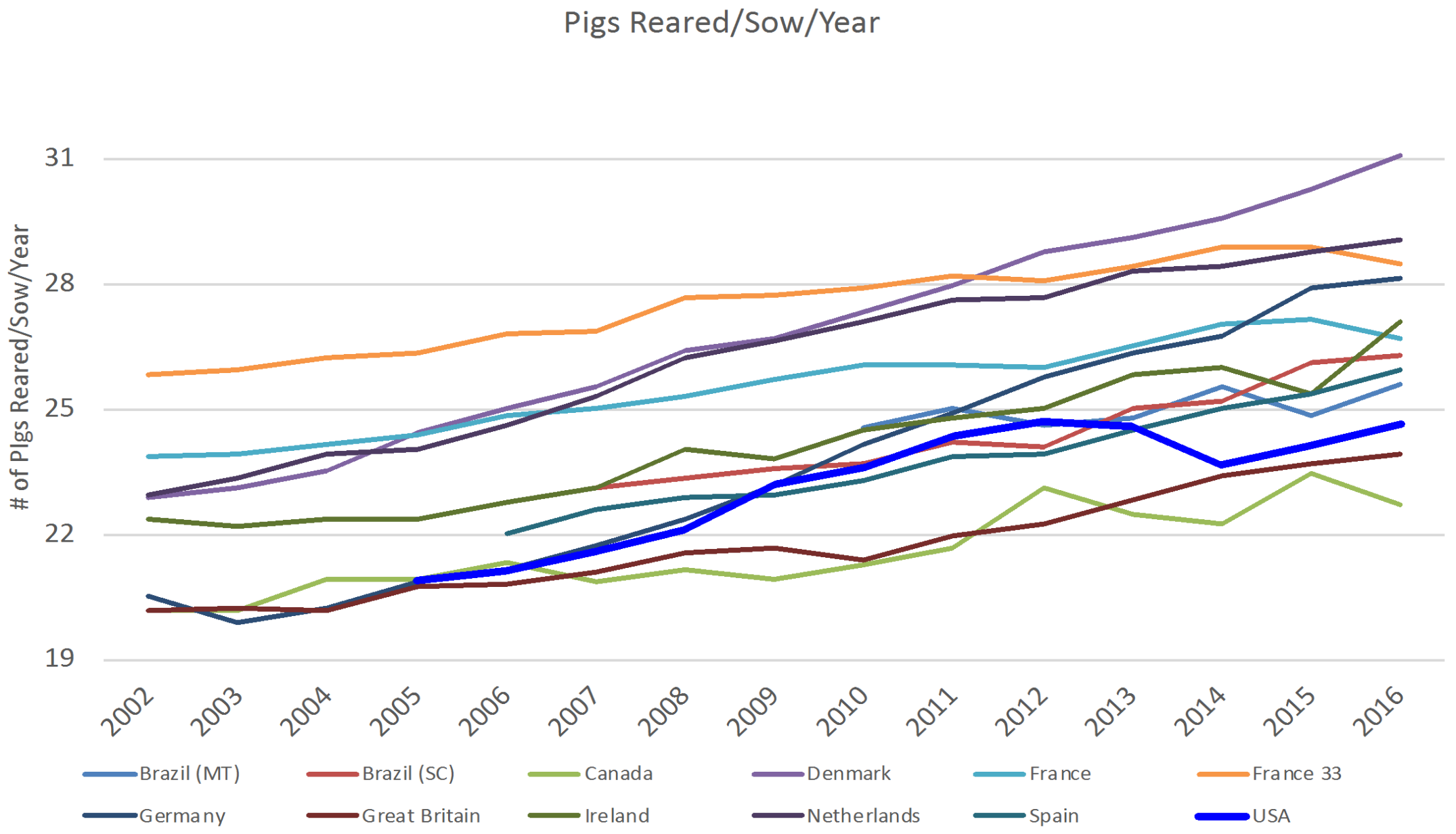
Per Capita Consumption
2017 to 2022: +2%
2017 to 2027: +3%

Exports
2017 to 2022: +14%
2017 to 2027: +24%


Total Cost Summary (Cold Weight) - 2016
Dollars/Pound
3.5
3
2.5
2
1.5
1
0.5
0
Brazil (MT)
Brazil (SC)
Canada
Denmark
France
Germany
Great Britain
Ireland
Netherlands
Spain
USA
Variable Costs
Feed
Maintenance
Fixed costs
Labor

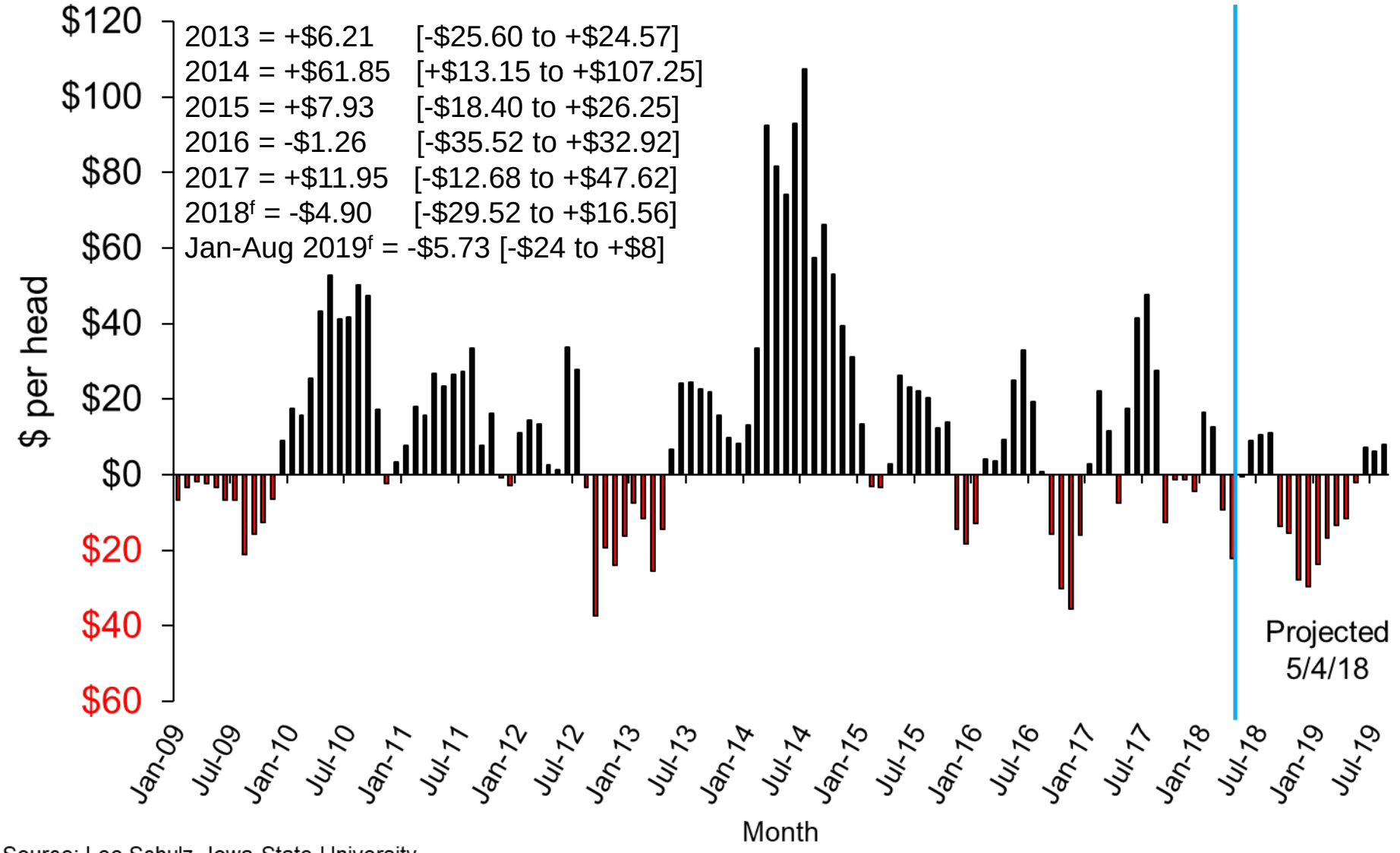
Average Net Profit Over Time - 2016



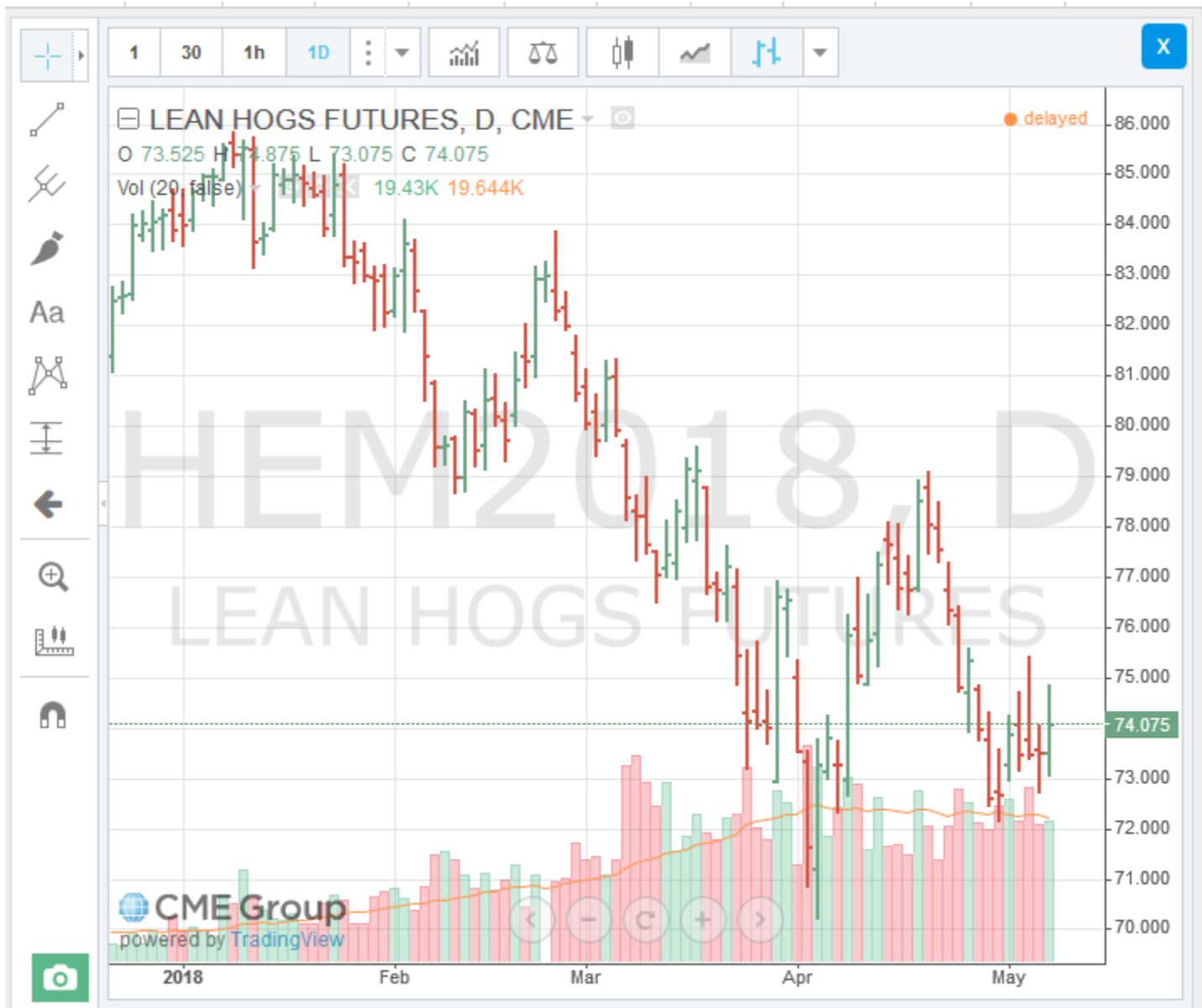

Pigs Reared/Sow/Year
# of Pigs Reared/Sow/Year
31
28
25
22
19
2002
2003
2004
2005
2006
2007
2008
2009
2010
2011
2012
2013
2014
2015
2016
Brazil (MT)
Brazil (SC)
Canada
Denmark
France
France 33
Germany
Great Britain
Ireland
Netherlands
Spain
USA

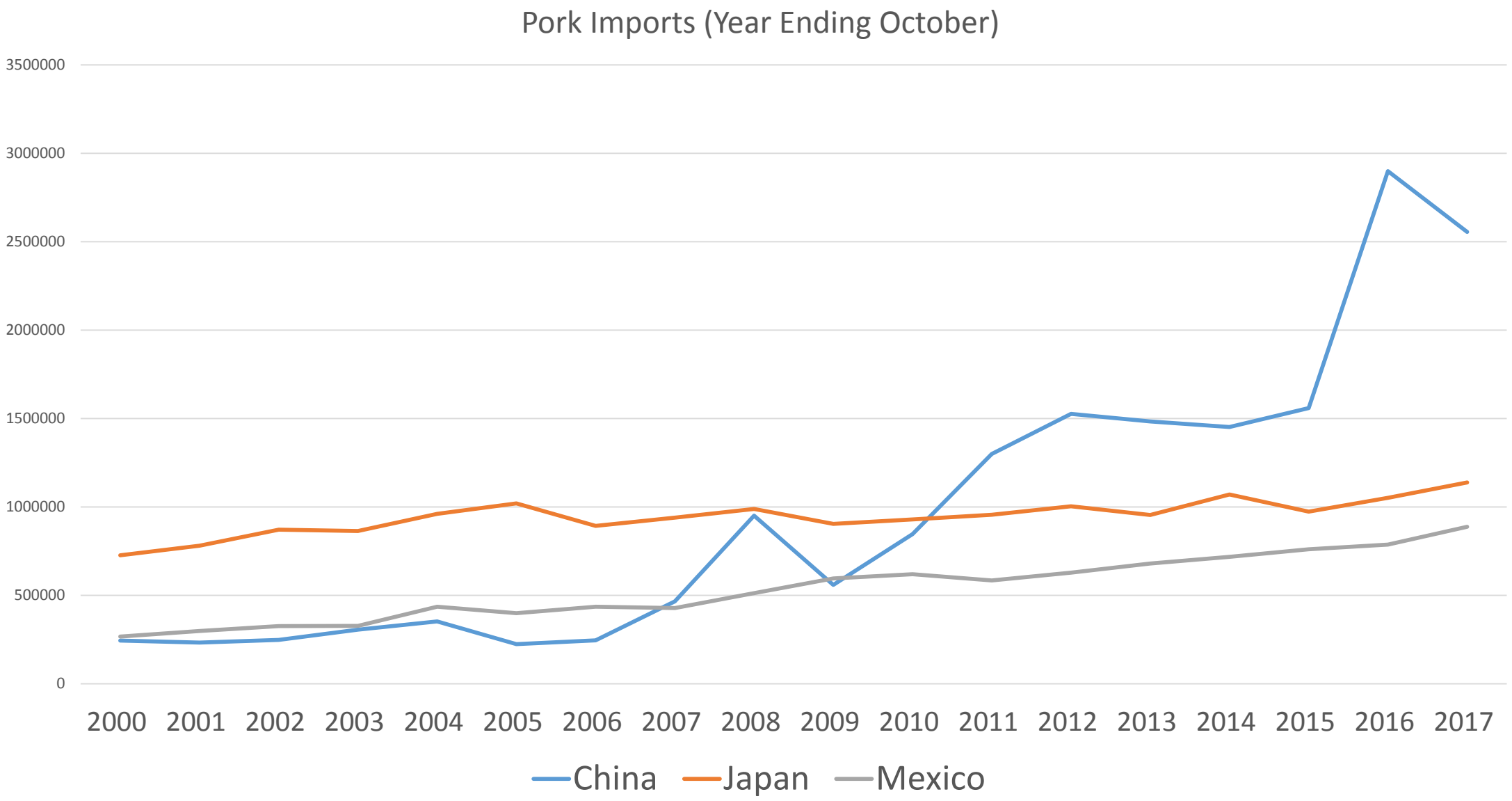
Estimated Returns to Farrow to Finish, Iowa

Past and Projected with Basis Adjusted Futures



Source: Lee Schulz, Iowa State University


1
30
1h
1D
X
LEAN HOGS FUTURES, D, CME
delayed
O 73.525 H 74.875 L 73.075 C 74.075
Vol (20, false) 19.43K 19.644K
HEM2018, D
LEAN HOGS FUTURES
86.000
85.000
84.000
83.000
82.000
81.000
80.000
79.000
78.000
77.000
76.000
75.000
74.075
73.000
72.000
71.000
70.000
CME Group
powered by TradingView
2018
Feb
Mar
Apr
May


Pork Imports (Year Ending October)
3500000
3000000
2500000
2000000
1500000
1000000
500000
0
2000
2001
2002
2003
2004
2005
2006
2007
2008
2009
2010
2011
2012
2013
2014
2015
2016
2017
China
Japan
Mexico

A new sow barn

Crop Land Reform in China

- China has begun to take seriously its red line on the minimum amount of crop land
- If you wish to use one acre for development you have to “create” a crop acre somewhere else
- It is allowing permits to be traded
- This has increased the opportunity cost of land in existing livestock buildings and made it difficult to build new buildings

Trade Concerns

- We had lined up a series of preferential free trade deals including Japan and Vietnam
- Instead, we are now on the outside of these deals and the EU, Canada and Mexico will have better access under TPP 11 and the EU-Japan FTA
- NAFTA needs to conclude by July 1 and is not progressing very well, instead Mexico is finalizing an FTA with the EU
- We lost the all-important Chinese market

Bottom Line

- Iowa is the most competitive place in the world to finish hogs
- Recent profit driven growth in the Iowa pork industry is a reflection of this
- If export markets are open we can export an additional 2-3 percent of production each year
- However export markets are closing and those that remain are very uncertain
- It appear increasing likely that we are at the wrong end of a hog cycle
- China could turn this around