

# Pork Stats - Table of Contents

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# Producers Reap Rewards

Since mid-2013, lower feed costs, robust pork demand and the spread of the Porcine Epidemic Diarrhea Virus (PEDV) have had a positive economic impact on the pork industry as a whole and on producers in particular.

Pork producers entered 2013 with production costs at record highs (See Figure 1). In fact, the highest observation ever recorded, \$98.84/cwt., carcass-weight, by my model of farrow-to-finish hog production costs was posted in January 2013. The model uses the production parameters of Iowa State University's (ISU) Estimated Costs and Returns for Iowa farrow-to-finish hog operations, which are maintained by ISU's Department of Economics.

Two key factors led to record costs. First, the dramatic expansion of U.S. ethanol production - due largely to federal and state subsidies and mandates - took an increasing portion of limited corn supplies, pushing prices higher

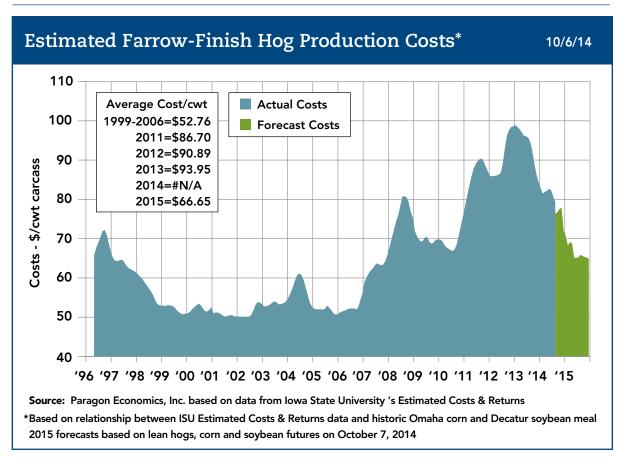
beginning in 2007. Corn prices reached crisis levels for pork producers in 2012 due to the first widespread drought to hit major corn- and soybean-producing regions since 1988. Significantly smaller corn and soybean harvests pushed feed ingredient prices - and thus production costs to record highs.

But more typical weather returned in 2013, with an almost perfect growing season in 2014.

#### **Ample Harvests Lower Production Costs**

Larger global harvests have pushed projected 2014 world year-end corn stocks to the highest level in 15 years and world year-end soybean stocks to record highs. As of mid-October, U.S. corn futures were priced in the low-\$3 range through 2015, with soybean meal futures near \$300/ton. This compares to over \$8/bushel for cash corn and \$565/ton for cash soybean meal in July 2012.

Figure 1



The result? As of October, 2015 production costs for pork producers are expected to fall well below \$70/cwt., carcass weight, the lowest level since 2010.

While lower grain prices have helped the cost side of producers' ledgers, strong demand has contributed to record-high prices for both pork and hogs. The strong demand is partly attributable to the recovery from the Great Recession. Lower unemployment, growing job numbers and an expanding economy have renewed consumer confidence and provided consumers with modest increases in disposable income.

Record-high beef prices and higher-than-expected chicken prices have driven some consumers to substitute pork into their diets. This also has increased demand.

#### **Renewed Interest in Pork**

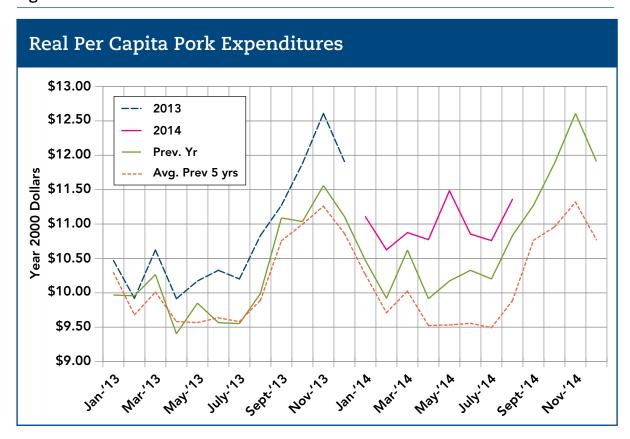
But the big driver behind strong pork demand appears to be improving consumer preferences. Renewed interest in the role protein plays in human diets and how meat can provide that

protein has drawn consumers back to animal proteins in general and to pork in particular. Add in a broadening realization that saturated fat is not the diet problem it was painted to be in the 1970s and 1980s, and you have a powerful recipe for stronger pork demand.

As shown in Figure 2, real per capita pork expenditures (RPCE) have exceeded year-earlier levels every month except one since January 2013. And the year-on-year growth has, in general, increased in 2014 with May's RPCE exceeding the year-earlier level by nearly 13 percent. The full-year RPCE for 2014 likely will reach its highest level since the Atkins Diet pushed pork demand higher in 2003 and 2004.

But the past two years have not been all positive. PEDV, first diagnosed in the United States in May 2013, proved lethal for suckling pigs with death rates consistently over 90 percent in affected herds. No one knows exactly how many pigs were lost, but my estimates, as of mid-October, are 8 million to 9 million head, which fits actual slaughter numbers reasonably well.

Figure 2



While PEDV has been devastating, its toll has driven pork and pig prices higher because demand for both pork and hogs is inelastic. In other words, a 1 percent reduction in supply causes an increase in price of more than 1 percent. Since revenue is quantity multiplied by price, the reduced pig numbers caused producer revenues to increase beyond levels they otherwise would have reached.

After significant financial losses from mid-2007 to 2009 and again in 2012 and 2013, producers are facing record profitability over the next two years, as shown in Figure 3. But there are significant risks, including how virulent PEDV may be when cooler temperatures return. Also, progress on PEDV vaccines has been slow and the effectiveness of the two available so far is not consistent. Further, previous efforts to make a vaccine to fight coronaviruses, such as PEDV

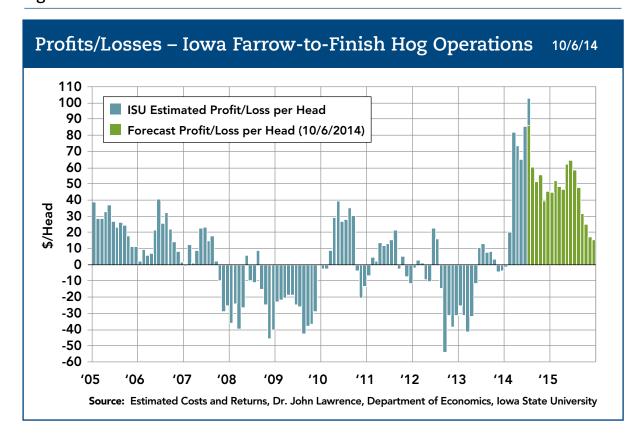
have had limited success.

Finally, large profits provide large incentives for expansion. The industry neither expands nor contracts as quickly as it once did, but exceptional profits and pig losses due to PEDV create a need for pigs that could drive producers to expand quickly. Such changes are almost always followed by much lower prices and financial losses. Whether and to what degree that happens remains to be seen.



Steve Meyer, president of Paragon **Economics and a Pork** Checkoff consultant, helped compile the information in the Pork Stats section.

Figure 3



# Industry Benchmarks

The Checkoff's Pork Industry Productivity Analysis provides data that documents the productivity of the U.S. pork industry. The information mined from analysis of the data is intended to benefit all producers, helping them improve productivity at the farm level. The data can be used by producers to identify areas where they can make improvements in management to rapidly improve profitability.

The analysis of the data also helps the Pork Checkoff, academics and funding agencies identify research funding areas that are likely to have the greatest impact on productivity. The full report, including all tables and graphs, can be found at www.pork.org/animalscience.

Average Conventional Finisher Productivity													
	2008 2009 2010 2011 2012 201												
Mortality (%)	6.29	5.12	4.70	4.48	5.03	5.04							
Finishing Weight (lbs.)	261.2	265.0	268.7	271.5	269.2	272.1							
Days in Finisher	125.7	124.3	124.6	122.7	121.5	122.8							
Average Daily Gain (lbs.)	1.69	1.75	1.76	1.81	1.81	1.81							
Feed Conversion	2.82	2.76)	2.77	2.71	2.68	2.66							

Average Wean-to-Finish Productivity											
	2007 2008 2009 2010 2011										
Mortality (%)	7.92	7.61	6.30	6.33	6.39	6.88					
Finishing Weight (lbs.)	261.7	264.2	270.5	273.6	270.1	274.0					
Days in Finisher	162.5	164.2	167.9	166.4	164.3	165.3					
Average Daily Gain (lbs.)	1.54	1.54	1.54	1.57	1.57	1.58					
Feed Conversion	2.51	2.54	2.52	2.50	2.50	2.50					

Average Sow Farm	Productiv	ity				
	2008	2009	2010	2011	2012	2013
Pigs/Mated Sow/Year	22.8	23.2	23.5	24.1	23.9	23.7
Litters/Mated Sow/Year	2.35	2.34	2.33	2.33	2.31	2.30
Total Born	12.5	12.8	13.0	13.4	13.4	13.6
Stillborn and Mummies	1.23	1.20	1.22	1.24	1.17	1.14
Number Born Alive	11.3	11.6	11.8	12.1	12.3	12.4
Number Weaned	9.7	9.9	10.0	10.2	10.3	10.2
Pre-weaning Mortality (%)	14.2	14.5	14.6	15.5	15.5	17.3
Weaning Weight (lbs.)	12.4	12.8	13.0	13.1	13.2	13.4
Weaning Age (days)	19.7	20.5	20.8	20.9	21.5	21.9

Average Nursery Farm Productivity												
	2008 2009 2010 2011 2012											
Mortality (%)	5.82	4.68	4.12	4.32	3.80	3.87						
Exit Weight (lbs.)	49.0	49.4	50.7	50.3	50.7	50.9						
Days in Nursery	47.4	46.2	46.2	46.0	46.0	45.4						
Average Daily Gain (lbs.)	0.78	0.80	0.82	0.81	0.82	0.83						
Feed Conversion	1.54	1.53	1.52	1.53	1.48	1.48						

# Conventional Finisher, Wean-to-Finish and Nursery Productivity

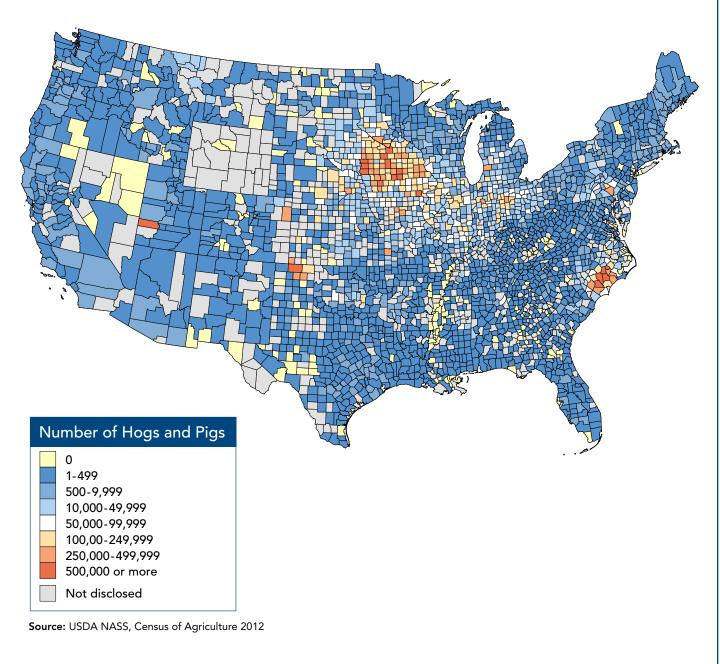
Top 10%, top 25% and bottom 25% of producers

	Conve	ntional Fi	nisher	We	an-to-Fin	ish	Nursery			
	Top 10%	Top 25%	Bottom 25%	Top 10%	Top 25%	Bottom 25%	Top 10%	Top 25%	Bottom 25%	
Exit Weight (lbs.)	300.1	291.1	252.9	297.2	290.9	255.5	66.1	61.5	39.9	
Mortality (%)	1.62	2.24	8.91	2.19	2.99	12.59	0.84	1.32	7.90	
Average Daily Gain (lbs.)	2.10	2.01	1.62	1.77	1.71	1.45	1.07	0.99	0.67	
Feed Conversion (F:G)	2.34	2.42	2.98	2.22	2.29	2.73	1.18	1.28	1.69	

Sow Farm Productivity
Top 10%, top 25% and bottom 25% of producers

10p 1070, top 2070 and bottom 2070 or producers										
	Top 10%	Top 25%	Bottom 25%							
Pigs/Mated Sow/Year	29.5	27.8	18.7							
Litters/Mated Sow/Year	2.74	2.59	2.00							
Total Born	15.3	14.8	12.1							
Stillborn and Mummies	0.50	0.68	1.67							
Number Born Alive	14.0	13.6	11.2							
Number Weaned	11.7	11.3	8.8							
Pre-weaning Mortality %	5.4	8.3	29.1							
Weaning Weight (lbs.)	16.7	15.7	11.5							
Weaning Age (days)	27.8	25.8	18.6							





# America's Top 100 Pig Counties – 2012

Rank	State	County	Inventory	Rank	State	County	Inventory
1	North Carolina	Sampson	1,858,801	51	Minnesota	Nicollet	268,330
2	North Carolina	Duplin	1,733,026	52	Minnesota	Pipestone	267,097
3	Oklahoma	Texas	1,204,159	53	Ohio	Mercer	261,390
4	Iowa	Sioux	1,176,751	54	lowa	Clayton	261,084
5	Iowa	Washington	986,774	55	Kansas	Morton	n/a*
6	Minnesota	Martin	812,229	56	Texas	Hansford	n/a*
7	lowa	Plymouth	744,433	57	Indiana	Carroll	255,898
8	lowa	Lyon	726,730	58	lowa	Fayette	254,042
9	lowa	Hardin	720,009	59	Michigan	Allegan	252,085
10	Utah	Beaver	n/a*	60	Minnesota	Faribault	249,759
11	North Carolina	Bladen	650,749	61	Minnesota	Jackson	245,947
12	lowa	Hamilton	647,537	62	Minnesota	Waseca	243,998
13 14	North Carolina	Wayne	637,481	63 64	Illinois	Pike	243,801
15	lowa lowa	Kossuth Carroll	609,437 557,905	65	lowa Iowa	Keokuk Black Hawk	241,012
16	Minnesota	Blue Earth	554,230	66	Illinois	De Kalb	240,800 239,648
17	lowa	Franklin	549,493	67	lowa	Pocahontas	238,701
18	North Carolina	Greene	510,510	68	Ohio	Darke	237,185
19	lowa	O Brien	497,223	69	Illinois	Livingston	236,426
20	lowa	Wright	483,790	70	Oklahoma	Beaver	n/a*
21	lowa	Palo Alto	464,236	71	Minnesota	Cottonwood	235,636
22	lowa	Buena Vista	438,072	72	lowa	Chickasaw	228,587
23	Iowa	Sac	432,045	73	lowa	Mitchell	224,241
24	Missouri	Mercer	n/a*	74	North Carolina	Pitt	224,123
25	Missouri	Vernon	397,621	75	Kansas	Wichita	n/a*
26	Colorado	Yuma	n/a*	76	Minnesota	Brown	218,163
27	Iowa	Butler	374,395	77	Missouri	Putnam	n/a*
28	lowa	Buchanan	372,762	78	lowa	Louisa	209,571
29	lowa	Hancock	370,569	79	lowa	Jasper	209,509
30	North Carolina	Jones	366,159	80	North Carolina	Pender	203,873
31	lowa	Delaware	363,437	81	lowa	Greene	202,217
32	Pennsylvania	Lancaster	359,505	82	lowa	Cedar	200,665
33	Iowa	Calhoun	359,106	83	lowa	Grundy	199,917
34	Missouri	Sullivan	358,146	84	Indiana	White	199,411
35	lowa	Osceola	334,938	85	Kansas	Nemaha	197,430
36	Minnesota	Mower	330,950	86	lowa	Howard	197,113
37	Minnesota	Freeborn	324,837	87	lowa	Bremer	193,373
38 39	Minnesota North Carolina	Nobles Onslow	323,679	88 89	Nebraska	Holt	192,232
40	North Carolina	Robeson	321,871 320,291	90	lowa Minnesota	Emmet Stevens	191,652 186,865
41	Texas	Ochiltree	n/a*	91	Illinois	Hancock	186,678
42	North Carolina	Columbus	317,515	92	lowa	Webster	185,596
43	lowa	Crawford	315,477	93	Illinois	Jasper	184,432
44	Nebraska	Platte	308,866	94	Minnesota	Watonwan	183,618
45	lowa	Mahaska	301,296	95	lowa	Marshall	181,741
46	lowa	Audubon	294,362	96	lowa	Clay	181,608
47	Minnesota	Rock	291,435	97	Minnesota	Redwood	179,776
48	North Carolina	Lenoir	287,583	98	Nebraska	Boone	178,155
49	lowa	Cherokee	282,516	99	Indiana	Randolph	177,605
50	Minnesota	Renville	280,943	100	Indiana	Clinton	174,185

**Source:** Rankings based on 2012 Census of Agriculture hog density map found at http://www.agcensus.usda.gov/Publications/2012/Online\_Resources/Ag\_Atlas\_Maps/Livestock\_and\_Animals/.

<sup>\*</sup>Data withheld by USDA due to confidentiality.

# State Rankings by Hogs and Pigs Inventory – 2013

	State	Production¹ (1,000 lbs.) Live Weight	Marketings² (1,000 lbs.) Live Weight	Value of Production <sup>3</sup> (\$1,000)	Cash Receipts <sup>3, 4</sup> (\$1,000)	Marketings <sup>4</sup> (1,000 head)	Inventory on Dec. 1, 2013 (1,000 head)	
1	lowa	10,660,075	11,232,124	6,589,669	7,584,685	42,464	20,500	
2	North Carolina	4,064,339	4,080,941	2,830,026	2,857,035	17,047	8,700	
3	Minnesota	3,909,753	4,054,222	2,506,743	2,851,348	18,415	8,000	
4	Illinois	2,020,410	2,082,774	1,467,955	1,586,373	12,122	4,650	
5	Indiana	1,648,744	1,705,663	1,059,687	1,186,750	7,682	3,750	
6	Nebraska	1,176,722	1,173,633	844,671	852,799	6,930	3,100	
7	Missouri	1,306,138	1,330,070	957,455	1,024,537	8,196	2,850	
8	Ohio	1,096,992	1,091,309	723,512	749,564	4,116	2,240	
9	Oklahoma	1,379,273	1,435,441	951,122	994,095	8,131	2,010	
10	Kansas	901,099	939,190	602,548	649,574	3,784	1,770	
11	South Dakota	702,313	737,135	506,702	554,747	4,152	1,210	
12	Pennsylvania	490,092	511,520	327,648	354,165	2,100	1,110	
13	Michigan	571,196	584,550	384,506	402,399	2,300	1,070	
14	Utah	287,512	291,775	210,844	213,805	1,616	710	
15	Colorado	258,047	272,197	206,040	217,819	2,750	690	
16	Texas	266,806	301,830	184,105	209,067	1,828	610	
17	Mississippi	181,205	171,227	125,919	119,550	878	500	
18	Kentucky	175,926	181,600	115,679	122,507	737	320	
19	Wisconsin	169,479	175,073	130,663	138,171	888	305	
20	Virginia	69,967	75,980	43,367	52,728	327	260	
21	South Carolina	46,781	48,947	30,709	33,988	256	245	
22	Tennessee	90,811	90,565	59,575	60,321	368	180	
23	Arizona	82,405	84,375	57,499	58,809	338	175	
24	Montana	84,479	87,038	61,995	63,628	464	166	
25	Georgia	81,359	90,679	55,757	63,953	634	141	
26	North Dakota	51,642	57,543	52,400	58,466	808	135	
27	Arkansas	100,830	108,211	94,510	100,858	1,430	115	
28	California	47,708	56,420	21,269	40,361	244	95	
29	Wyoming	124,572	124,160	89,154	88,852	731	90	
30	Alabama	60,198	70,098	41,163	48,766	441	85	
31	New York	24,581	26,074	16,618	17,836	132	66	
32	Idaho & Washington	45,656	45,827	31,294	32,031	184	62	
33	Delaware-Maryland	15,714	15,948	9,215	11,407	79	28	
34	New England <sup>5</sup>	10,745	10,596	7,109	7,376	49	25	
	Florida	3,489	3,770	2,293	2,471	28	15	
	Hawaii	4,062	3,264	2,831	2,275	14	12	
37	New Jersey	1,664	2,332	589	1,594	25	9	
38		3,034	3,351	2,122	2,367	15	9	
	Louisiana	1,520	1,368	1,002	907	7	8	
40	West Virginia	1,772	1,375	1,285	1,023	8	5	
41		1,798	1,968	926	1,372	8	2	
42		693	705	472	486	3	1	
43	Alaska	374	275	261	192	1	1	
	United States	32,221,975	33,363,143	21,408,909	23,421,057	152,726	66,025	

Source: Meat Animal Production, Disposition and Income, USDA, NASS, April 2014

<sup>&</sup>lt;sup>1</sup>Adjustments made for changes in inventory and for in-shipments.

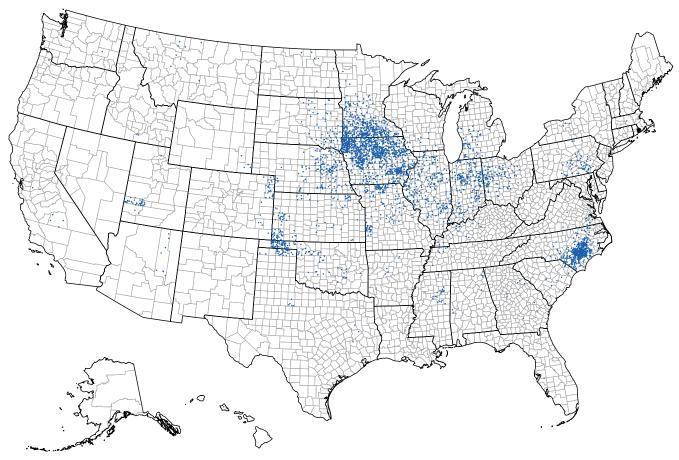
<sup>&</sup>lt;sup>2</sup>Excludes custom slaughter for use on farms where produced and inter-farm sales within the state.

<sup>&</sup>lt;sup>3</sup>Includes allowance for higher average price of state in-shipments and out-shipments of feeder pigs.

<sup>&</sup>lt;sup>4</sup>Includes custom slaughter for use on farms where produced and state out-shipments, but excludes inter-farm sales within the state.

<sup>&</sup>lt;sup>5</sup>New England includes Maine, Massachusetts, Vermont, New Hampshire, Connecticut and Rhode Island.

### Hogs and Pigs Inventory – 2012

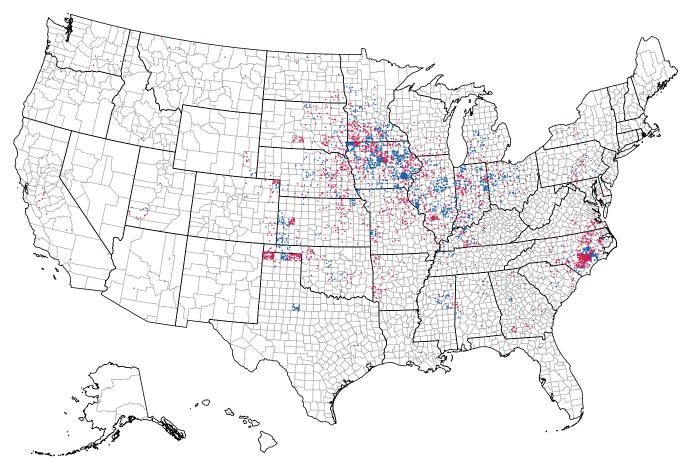


1 dot = 20,000 hogs and pigs U.S. total = 66,026,785

The vast majority of hogs and pigs in the United Stated reside in the upper Midwest or Corn Belt states. Since 1990, though, significant pork production has developed in North Carolina, the Oklahoma-Texas Panhandle region and Utah.

Source: USDA, 2012 Census of Agriculture, USDA, National Agricultural Statistics Service Note: 2012 is the most current data that available.

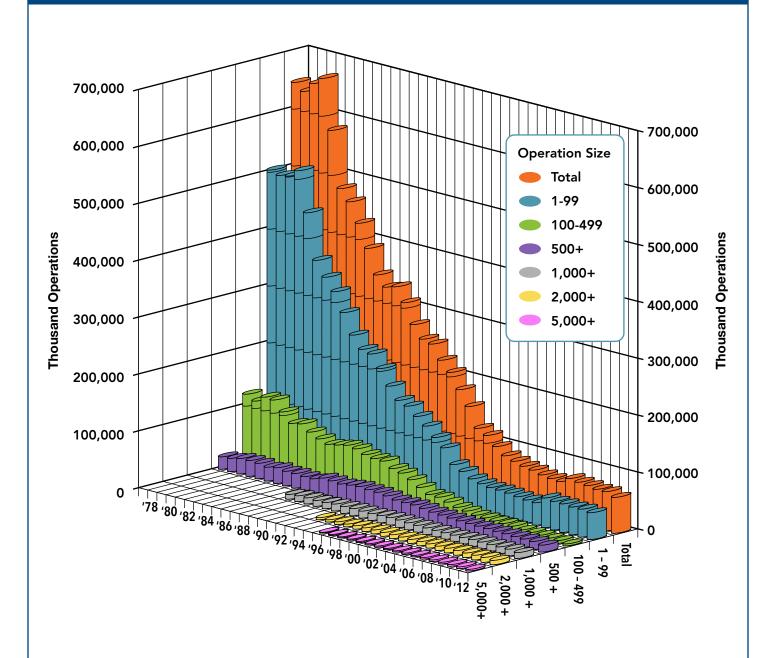
# Change in U.S. Hogs and Pigs Inventory - 2007 to 2012



1 dot = increase of 5,000 hogs and pigs 1 dot = decrease of 5,000 Hogs and Pigs United States Net Decrease -1,759,533

Source: USDA, 2012 Census of Agriculture, USDA, National Agricultural Statistics Service Note: 2012 is the most current data that is available.

### Number of U.S. Hog Operations by Inventory Size



Notes: 1) Categories for 500 head or more are cumulative (i.e. the 500+ column includes the 1,000+ column which includes the 2,000+). 2) USDA data for number of hog operations represent the number of locations that had a hog in inventory on the given date.

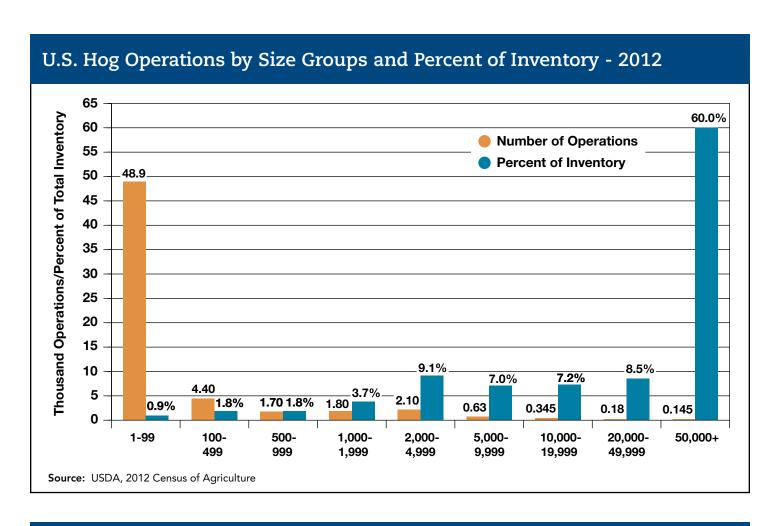
Source: USDA -- Hogs and Pigs Report through 1994; Farms, Land in Farms and Livestock Operations 1995-2011, 2012 Census of Agriculture 2012

# Number of U.S. Hog Operations

	4.3				•	Operation S	ize		
Invent	ory (thous	and head)			Numbe	r of Head in	Inventory		
Year	Total	Avg. Per Operation	1 to 99	100 to 499	500+	1,000+	2,000+	5,000+	Total Operations
1977	56,539	87.39	504,013	120,989	21,998				647,000
1978	60,356	95.00	498,711	113,083	23,506				635,300
1979	67,318	103.05	501,688	124,116	27,436				653,240
1980	64,462	96.71	515,243	123,312	27,995				666,550
1981	58,698	101.32	445,489	106,593	27,228				579,310
1982	54,534	113.37	366,071	90,436	24,533				481,040
1983	56,694	122.69	340,575	93,808	27,727				462,110
1984	54,073	126.18	319,255	83,563	25,712				428,530
1985	52,314	134.63	286,765	75,771	26,034				388,570
1986	51,001	147.36	251,261	70,256	24,572				346,090
1987	54,384	165.48	230,377	73,287	24,977	8,545			328,640
1988	55,466	165.81	226,447	77,039	30,349	10,339			333,500
1989	53,788	173.88	205,021	74,947	29,731	10,840			309,700
1990	54,416	197.78	178,210	68,860	28,370	10,467			275,440
1991	57,649	227.20	157,412	66,011	30,467	10,917			253,890
1992	58,202	232.93	151,447	65,868	32,186	12,475			249,500
1993	57,940	257.11	137,500	56,940	30,770	12,140	3,743		225,210
1994	59,738	288.45	124,600	53,000	30,380	12,700	4,160		207,980
1995	58,201	320.57	108,800	45,510	28,240	12,520	4,800		181,750
1996	56,124	359.49	94,800	36,270	25,180	12,160	4,960	1,440	156,250
1997	61,158	500.64	69,460	28,010	24,610	12,940	6,180	1,830	122,160
1998	62,204	546.46	61,670	27,320	24,845	13,495	6,670	1,905	113,830
1999	59,335	602.63	52,730	22,850	22,880	13,625	7,125	2,005	98,460
2000	59,110	684.46	48,210	17,775	20,400	12,770	6,915	2,090	86,360
2001	59,722	738.40	45,812	15,405	19,660	12,462	6,993	2,199	80,880
2002	59,554	781.04	45,640	12,261	18,349	12,115	7,084	2,273	76,250
2003	60,453	821.37	44,285	11,615	17,700	12,013	7,136	2,265	73,600
2004	60,982	877.44	42,095	10,358	17,045	11,890	7,441	2,306	69,500
2005	61,463	913.54	40,564	10,116	16,600	11,857	7,598	2,361	67,280
2006	62,516	948.07	39,882	9,602	16,456	11,965	7,749	2,467	65,940
2007	63,947	847.54	52,445	7,079	15,926	12,306	8,258	2,861	75,450
2008	67,400	921.39	50,680	6,740	15,730	12,240	8,290	2,920	73,150
2009	65,327	914.30	50,400	6,100	14,950	11,750	8,200	2,950	71,450
2010	64,925	939.58	49,000	5,200	14,900	12,100	8,450	3,100	69,100
2011	66,361	960.36	49,400	5,100	14,600	12,200	8,800	3,300	69,100
2012	63,246	971.79	47,284	3,584	12,378	10,401	7,724	3,006	63,246

Notes: 1) Categories for 500 head or more are cumulative (i.e. the 500+ column includes the 1,000+ column which includes the 2,000+). 2) USDA data for number of hog operations represent the number of locations that had a hog in inventory on the given date.

Source: USDA -- Hogs and Pigs Report through 1994; Farms, Land in Farms and Livestock Operations 1995-2011, 2012 Census of Agriculture 2012



Percer	Percent of U.S. Hog Inventory by Operating Size, 1998-2012													
	1-99 Head	100 to 499 Head	500 to 999 Head	1,000 to 1,999 Head	2,000 to 4,999 Head	5,000 to 9,999 Head	10,000 to 19,999 Head	20,000 to 49,999 Head	50,000+ Head					
1998	2	10	11	11	12	7	7	5	37					
1999	2	9	9	10	12	8	7	6	41					
2000	1	7	8	9	11	7	7	7	45					
2001	1	6	7	8	11	7	7	8	47					
2002	1	5	6	8	10	7	7	7	49					
2003	1	5	6	8	10	8	7	7	50					
2004	1	4	5	6	10	7	7	7	54					
2005	1	4	4	6	9	7	7	9	55					
2006	1	3	3	5	10	8	8	10	54					
2007	1	3	3	5	11	8	8	9	55					
2008	1	2	2	5	11	7	7	9	56					
2009	1	2	2	4	10	8	7	9	57					
2010	1	2	2	4	10	8	8	9	57					
2011	1	2	2	4	10	7	8	9	58					
2012	1	2	2	4	9	7	7	9	60					

Source: USDA, Farms, Land In Farms and Livestock Operations, 1998-2011, 2012 Census of Agriculture

# Number of Operations by Size Group

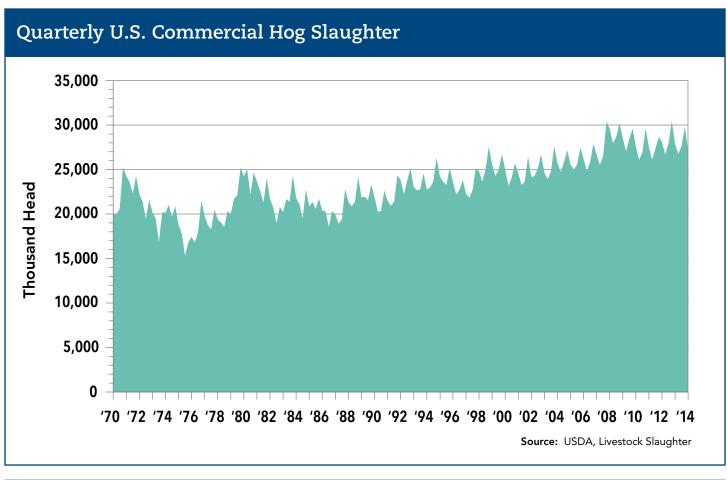
Top 20 Hog Inventory States and United States, 2007 and 2012

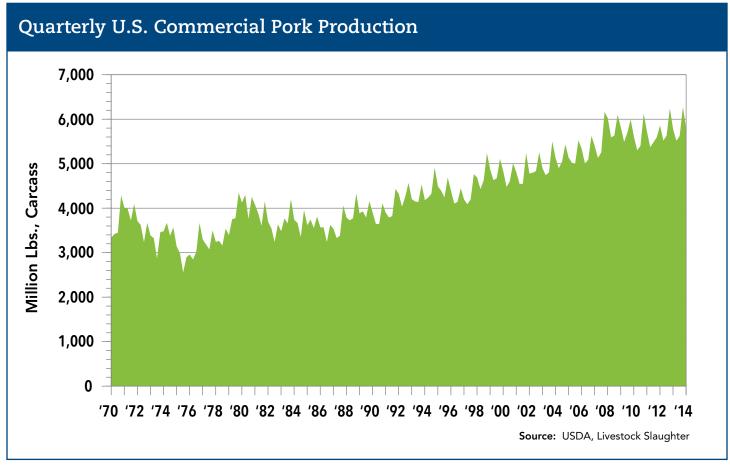
#### **Operations Having:**

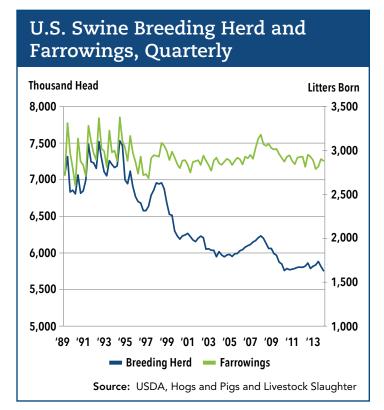
State	1 to He	99 ead	100 to		500 to		1,000 to	o 1,999 ad	2,000 to	•	5,0 He	00+ ad	То	tal
	2007	2012	2007	2012	2007	2012	2007	2012	2007	2012	2007	2012	2007	2012
Iowa	1,365	982	1,847	785	1,171	684	1,273	980	1,866	1,795	808	1,040	8,330	6,266
Texas	4,369	4,813	82	70	9	7		4	3	4	8	7	4,471	4,905
Ohio	2,686	2,618	352	212	148	89	193	159	272	317	67	99	3,718	3,494
Minnesota	1,490	1,171	678	364	459	272	533	336	875	888	347	324	4,382	3,355
Pennsylvania	2,907	2,457	248	177	117	74	164	190	164	163	37	36	3,637	3,097
Indiana	1,839	1,650	515	297	317	178	258	171	320	255	171	206	3,420	2,757
Wisconsin	2,698	2,000	294	148	87	38	65	49	37	27	7	8	3,188	2,270
N.C.	1,095	1,125	89	50	48	31	454	97	542	385	608	529	2,836	2,217
Michigan	2,138	1,865	240	108	104	43	67	67	100	68	42	47	2,691	2,198
Missouri	2,034	1,663	437	144	146	49	123	68	173	121	86	83	2,999	2,128
Illinois	1,203	991	525	238	269	144	293	160	366	265	208	247	2,864	2,045
Oklahoma	2,551	1,842	40	21	16	3	28	28	26	20	41	33	2,702	1,947
Nebraska	696	599	635	287	318	163	264	185	203	143	97	99	2,213	1,476
Kansas	988	801	217	60	75	31	54	36	63	37	57	45	1,454	1,010
Colorado	1,106	965	32	18	5		1	3	12	4	15	11	1,171	1,001
Arkansas	995	672	17	13	42	30	47	27	35	7	6	3	1,142	752
S.D.	377	355	218	73	101	54	68	58	103	63	92	78	959	681
Utah	576	646	16	12			1	2	2	1	16	8	611	669
Mississippi	622	493	9	7	6	4	3		22	13	21	23	683	540
N.D.	251	188	61	11	10	2	10	1	8	7	10	9	350	218
Other States	20,535	19,388	562	489	140	81	114	56	164	135	106	71	21,621	20,220
United States	52,521	47,284	7,114	3,584	3,588	1,977	4,013	2,677	5,356	4,718	2,850	3,006	75,442	63,246

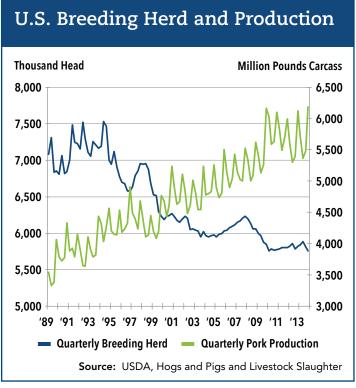
Source: USDA Census of Agriculture, 2007 and 2012

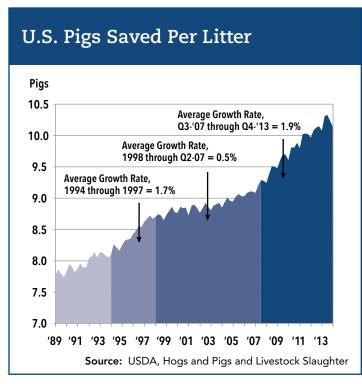
Note: An operation is any farm having one or more hogs or pigs on hand at any time during the year.

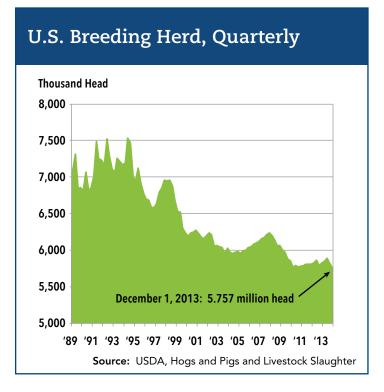












# U.S. Commercial Livestock Slaughter and Meat Production\*

	Hog	Pork	Cattle	Beef	Chicken	Chicken	Turkey	Turkey
Year	Slaughter (1,000 head)	Production (million lbs.)	Slaughter (1,000 head)	Production	Slaughter (million head)	Production	Slaughter (million head)	Production
1950	69,543		17,901	9,248				
1951	76,061		16,376	8,549				
1952	77,690		17,856	9,337				
1953	66,913		23,606	12,055				
1954	64,827		25,017	12,601				
1955	74,216	13,477	25,723	13,213				
1956	78,513	13,805	26,862	14,090				
1957	72,595	12,822	26,232	13,852				
1958	70,965	12,674	23,555	12,983				
1959	81,582	14,540	22,931	13,233				
1960	79,036	13,905	25,224	14,374	1,534	3,699	71	948
1961	77,335	13,647	25,635	14,930	1,726	4,287	93	1,256
1962	79,334	13,953	26,083	14,931	1,763	4,361	79	1,097
1963	83,324	14,492	27,232	16,049	1,835	4,607	82	1,164
1964	83,019	14,597	30,818	18,037	1,915	4,810	88	1,253
1965	73,784	12,782	32,347	18,325	2,058	5,194	93	1,330
1966	74,011	12,797	33,727 33,869	19,493	2,236 2,319	5,604 5,874	103	1,478
1967 1968	82,124 85,160	14,130 14,516	35,026	19,991 20,664	2,319	5,876 5,939	114 97	1,665 1,456
1968	83,839	14,244	35,026	20,864	2,516	6,484	97 95	1,433
1970	85,817	14,699	35,025	21,505	2,770	7,161	106	1,567
1971	94,438	16,006	35,585	21,733	2,779	7,101	112	1,642
1972	84,707	14,422	35,779	22,250	2,936	7,823	121	1,797
1973	76,795	13,223	33,687	21,089	2,908	7,786	123	1,788
1974	81,762	14,331	36,812	22,843	2,900	7,917	127	1,836
1975	68,687	11,779	40,911	23,672	2,922	7,966	119	1,716
1976	73,784	12,688	42,654	25,667	3,253	8,987	134	1,950
1977	77,303	13,248	41,856	24,986	3,334	9,227	128	1,892
1978	77,315	13,393	39,552	24,009	3,516	9,883	132	1,983
1979	89,099	15,451	33,678	21,262	3,843	10,916	146	2,182
1980	96,074	16,617	33,807	21,469	3,929	11,272	159	2,332
1981	91,575	15,873	34,953	22,214	4,076	11,906	166	2,509
1982	82,190	14,229	35,843	22,366	4,068	12,039	160	2,459
1983 1984	87,584	15,199	36,649	23,060	4,133 4,272	12,389	165 166	2,563
1985	85,168 84,492	14,812 14,807	37,582 36,293	23,418 23,557	4,439	12,999 13,569	175	2,574 2,800
1986	79,598	14,063	37,288	24,213	4,643	14,266	197	3,133
1987	81,081	14,374	35,647	23,405	4,972	15,502	231	3,717
1988	87,795	15,684	35,079	23,424	5,159	16,124	237	3,923
1989	88,691	15,813	33,917	22,974	5,499	17,334	252	4,175
1990	85,135	15,354	33,243	22,634	5,841	18,555	271	4,561
1991	88,169	15,999	32,689	22,800	6,140	19,728	277	4,652
1992	94,889	17,234	32,874	22,968	6,425	21,052	281	4,829
1993	93,068	17,088	33,324	22,942	6,681	22,178	276	4,848
1994	95,697	17,696	34,196	24,278	7,072	23,846	279	4,992
1995	96,326	17,849	35,639	25,115	7,371	25,021	281	5,129
1996	92,394	17,117	36,584	25,419	7,546	26,336	293	5,466
1997	91,960	17,274	36,318	25,384	7,736	27,271	290	5,478
1998	101,029	19,010	35,465	25,653	7,838	27,863	273	5,281
1999	101,544	19,308	36,150	26,386	8,112	29,741	265	5,297
2000 2001	97,976 97,962	18,952 19,160	35,631 34,771	26,777 26,107	8,261 8,406	30,495 31,266	268 269	5,402 5,562
2001	97,962 99,927	19,160	34,771	27,000	8,546	31,266	269 271	5,562 5,713
2002	100,931	19,062	34,907	26,238	8,537	32,749	268	5,650
2003	103,463	20,529	32,728	24,548	8,752	34,063	254	5,454
2005	103,582	20,704	32,388	24,683	8,854	35,365	248	5,504
2006	104,737	21,074	33,698	26,152	8,838	35,500	255	5,682
2007	109,172	21,963	34,264	26,421	8,903	36,159	265	5,951
2008	116,452	23,367	34,365	26,561	8,921	36,906	271	6,247
2009	113,618	23,020	33,338	25,965	8,520	35,510	246	5,663
2010	110,260	22,456	34,249	26,304	8,649	36,910	243	5,644
2011	110,860	22,778	34,087	26,195	8,538	37,202	247	5,791
2012	113,163	23,273	32,951	25,913	8,429	37,039	250	5,967
2013	112,077	23,206	32,462	25,720	8,504	37,830	239	5,805

Source: USDA, Red Meat Yearbook and Poultry Yearbook, 2008; Livestock Slaughter and Poultry Slaughter, 2009-2013.

<sup>\*</sup>Pork and beef production are carcass weight. Chicken and turkey production are ready-to-cook weight.

# Productivity Measures of U.S. Pork Industry

	Pigs/ Litter	Litters/ Breeding Animal	Slaughter/ Breeding Animal	Pork Production/ Breeding Animal (lbs.)	Live Weight (lbs.)	Dressing Percent	Dressed Weight (lbs.)	Lard Yield (lbs.)	Retail Meat (lbs.)	Retail Meat Yield (lbs.)
1974	7.10	1.43	8.52	1,706.00	245.3	77.8	190.7		129.0	52.6
1975	7.17	1.36	8.30	1,583.74	240.3	77.6	186.4	14.8	130.0	54.1
1976	7.26	1.43	8.19	1,537.52	238.3	78.4	186.8	14.4	131.0	55.0
1977	7.15	1.42	8.14	1,535.37	237.5	71.5	169.8	13.5	131.0	55.2
1978	7.12	1.40	7.83	1,487.15	240.2	71.4	171.5	13.0	132.0	55.0
1979	7.09	1.46	8.02	1,535.79	242.0	71.2	172.3	13.0	133.0	55.0
1980	7.22	1.51	9.21	1,766.39	242.0	71.0	171.9	12.8	133.0	55.0
1981	7.39	1.53	9.89	1,891.02	243.1	71.0	172.5	12.9	134.0	55.1
1982	7.38	1.57	10.11	1,917.80	242.8	70.9	172.3	11.2	134.0	55.2
1983	7.47	1.61	10.26	1,954.39	243.4	71.3	173.7	11.2	135.0	55.5
1984	7.50	1.62	10.81	2,058.53	243.8	71.2	173.6	11.0	135.0	55.4
1985	7.65	1.63	11.22	2,140.32	245.0	71.4	174.9	11.0	136.0	55.5
1986	7.72	1.65	11.23	2,157.08	246.3	71.8	176.8	11.0	138.0	56.0
1987	7.76	1.63	10.62	2,166.23	247.8	71.5	177.3	10.6	137.0	55.3
1988	7.70	1.67	11.05	2,212.50	249.2	71.8	178.9	10.6	138.0	55.4
1989	7.79	1.68	11.44	2,225.16	248.8	71.8	178.7		138.0	55.5
1990	7.88	1.66	11.26	2,209.37	249.9	72.3	180.6		140.6	56.3
1991	7.90	1.67	11.12	2,187.08	252.2	72.0	181.7		141.3	56.0
1992	8.08	1.69	11.99	2,357.87	253.0	71.8	181.8		142.1	56.2
1993	8.10	1.68	11.92	2,366.58	254.3	72.3	183.8		143.0	56.2
1994 1995	8.19 8.31	1.70 1.71	12.02 12.68	2,415.50	255.7 256.5	72.6 72.4	185.5 185.8		143.9 144.1	56.3 56.2
1995	8.50	1.68	12.60	2,554.05 2,537.57	254.0	73.2	186.0		144.1	56.8
1996	8.68	1.69	12.01	2,495.29	256.3	73.5	188.4		144.3	57.0
1998	8.71	1.76	13.29	2,473.27	256.6	73.6	188.8		146.5	57.0
1999	8.79	1.82	14.37	3,008.14	258.9	73.7	190.9		148.2	57.1
2000	8.83	1.83	14.24	3,037.44	262.5	74.1	194.5		150.9	57.5
2001	8.84	1.84	14.20	3,111.26	264.3	74.4	196.5		152.5	57.7
2002	8.85	1.87	14.62	3,246.63	265.3	74.4	197.5		153.3	57.8
2003	8.88	1.91	14.78	3,381.52	266.6	74.6	198.8		154.2	57.9
2004	8.94	1.93	15.14	3,505.82	266.9	74.7	199.3		154.7	58.0
2005	9.02	1.93	15.18	3,519.86	268.9	74.7	200.9		155.9	58.0
2006	9.08	1.95	15.01	3,544.74	269.3	74.9	201.7		156.5	58.1
2007	9.22	2.05	15.24	3,631.34	269.1	74.9	201.5		156.4	58.1
2008	9.41	2.04	16.70	3,947.24	268.4	74.9	200.9		155.9	58.1
2009	9.62	1.98	17.33	4,003.70	270.8	74.9	202.9		157.5	58.1
2010	9.78	1.93	17.10	3,935.28	272.6	74.8	204.0		158.3	58.1
2011	9.97	1.92	17.33	4,027.33	274.8	74.8	205.6		159.5	58.0
2012	10.08	1.90	17.83	4,135.38	275.1	74.8	205.8		159.7	58.0
2013	10.22	1.86	17.84	4,120.13	276.5	74.9	207.2		160.8	58.1

#### Notes

Slaughter/breeding animal computed as U.S.-born barrow and gilt slaughter divided by average sow herd for the year.

Pork production/breeding animal computed as U.S. pork production (all of U.S. born pigs' weights, 200 lbs./head on imported feeder pigs, none of the production from imported slaughter hogs) divided by average breeding herd.

No ongoing data for lard yield. The retail meat yield is computed by multiplying the carcass yield by a constant carcass to retail factor from USDA-ERS. This factor is about 17 years old, but it is all that is available.

#### Estimated Daily U.S. Slaughter Capacity by Plant (head per day) Spring 2012 Spring 2013 Spring 2014 Company Plant Rank Company Company Company Plant Plant Plant Smithfield Tar Heel, N.C. 34,000 34,000 36,500 Gwaltney, Va. Sioux Falls, S.D Smithfield, Va. 10,400 10,400 10,400 20,500 10,400 9,400 20,500 10,400 Morrell 19,000 **Farmland** Crete, Neb. 10,400 **Farmland** Denison, Iowa 9,400 9,400 11,400 **Farmland** Monmouth, Ill. 11,400 11,400 Prem. Std. Milan, Mo. 10,400 10,300 10,300 Clinton, N.C. Waterloo, Iowa 10,400 19,500 10,600 19,500 15,300 115,400 117,000 10,600 19,500 15,300 Lundy's 119,500 Tyson Foods (IBP) 15,300 16,500 9,850 7,875 Dakota Dunes, S.D. Logansport, Ind. 16,500 9,950 7,925 16,500 9,950 7,925 Storm Lake, Iowa Col. Junction, Iowa Madison, Neb. 7,750 18,500 18,500 7,750 20,000 20,000 76,925 76,775 76,925 Perry, Iowa 20,000 20,000 Swift Worthington, Minn. Greeley, Colo. Marshalltown, Iowa 10,000 19,400 10,000 19,400 10,000 19,400 <u>Louisville, Ky.</u> 47,000 50,000 50,000 Cargill Pork Beardstown, Ill. 18,400 19,000 18,400 19,000 18,400 19,000 Ottumwa, lowa Austin, Minn. 37,800 37,800 37,800 <u>Wichita, Kan.</u> 10,500 10,500 Austin, Minn. Fremont, Neb 10,500 Los Angeles, Calif St. Joseph, Mo. Guymon, Okla. 37,300 20,000 19,800 36,800 21,000 19,800 Clougherty 7,800 37,300 20,000 19,800 7,800 20,000 19,800 20,000 19,800 17,000 Triumph Foods 19,800 Seaboard Farms Indiana Packing Co. Delphi, Ind. 17,000 17,000 17,000 17,000 17,000 Hatfield Quality Meats Hatfield, Pa Rantoul, III. 10,600 10,600 10,400 10,400 10,400 10,400 4,200 4,500 4,200 4,500 4,800 4,500 10 Rantoul Foods 4,800 4,800 4,800 4,500 4,200 Sioux-Preme Packing Sioux Center, Iowa 4,500 4,500 Sandusky, Ohio Watertown, Wis 4,200 700 J.H Routh 4,200 4,200 Johnsonville Sausage Momence, III. 1,600 1,650 ,650 1,000 3,200 3,000 2,500 2,800 3,300 3,200 3,000 2,500 2,800 1,000 3,200 3,000 3,400 3,200 3,000 1,000 3,200 3,000 3,400 3,200 3,000 Holton, Kan. Pine Ridge Farms Des Moines, Iowa Greenwood Packing Greenwood, S.C. 3,000 2,800 3,000 2,800 2,000 3,000 2,800 3,000 2,800 Premium Iowa Pork Hospers, Iowa Hillshire Brands (Jimmy Dean)\* Newbern, Tenn. Marengo, III. Spring, Texas 2,000 1,500 Pork King Packing Fisher Ham and Meat\* 2,000 2,000 1,500 2,200 1,500 2,200 2,000 2,000 2,000 Navasota, Texas Hazellton, Pa. 500 2,000 2,000 2,000 2,000 2,000 500 2,000 2,000 2,000 2,000 2,000 500 2,000 2,000 20 21 22 23 24 25 26 27 28 **USA Pork Products\*** Curtiss, Wis. Mount Morris, III. Abbyland Foods 1,600 1,500 1,500 1,600 1,500 1,500 1,600 1,750 1,500 1,600 1,750 1,500 Spectrum Meats 1,600 1,600 Yosemite Meats Modesto, Calif. ,500 1,500 1,500 Dakota Pork, Inc.\* Estherville, Iowa ,500 1,350 1,300 Leidy's Souderton, Pa. ,300 1,300 1,300 1,300 1,350 Martin's Pork Products\* Falcon, N.C. 1,300 1,300 1,300 1,300 1,300 1,200 1,200 Sioux City, Iowa Orland, Calif. 1,200 1,200 1,200 1,200 1,200 1,200 1,200 1,200 1,200 1,200 Verschoor Meats\* Olson Meat Co.\* ,150 500 Mentone, Ind Xenia, Ohio 1,150 400 ,150 ,150 ,150 <u>Vin-Lee-Rom\*</u> 400 **Bob Evans Farms** Hillsdale, Mich. 400 400 500 Closed 900 Richardson, Texas Warsaw, N.C. 400 900 31 33 34 35 36 37 38 40 Atwater, Calif. Kodak, Tenn. Peoria, III. 850 850 850 Jim's Farm Meats 850 850 850 Swaggerty Sausage Co. 800 800 800 800 800 800 450 750 750 750 750 750 Calihan Packing Co. 450 450 450 750 Independent Meats Twin Falls, Idaho 750 750 Peoria Packing Chicago, III. 600 600 600 600 600 600 Masami Meat Co. Klammath Falls, Ore. 600 600 600 600 600 600 Dekalb County Packing Co. De Kalb, Ill 500 500 500 500 500 450 Parks Family Meats Warsaw, N.C. 450 450 450 450 450 Pioneer Packing Co. F.B. Purnell Sausage Bowling Green, Ohio 425 425 425 425 425 41 42 43 Simpsonville, Ky. 400 400 400 400 400 400 Williams Sausage Co. Union City, Ky. 400 400 400 400 400 400 Carleton, Ore Morris, III. 375 300 Carleton Packing Co. 375 375 375 Morris Meat Packing 300 300 300 300 300 45 Wampler's Sausage Lenoir City, Tenn. 300 300 300 300 300 300 Dean Sausage Atalla, Ala. 300 300 300 300 300 200 175 200 175 47 Dealaman Enterprises, Inc. Warren, N.J. 200 200 200 200 175 175 Weltin Meat Packing Minden City, Mich. 175 49 Southern Quality Meats Pontotoc, Miss. 160 160 160 160 160 160 Gunnoe Sausage 110 110 110 110 Goode, Va. Dayton Meat Co. Dayton, Ore. 100 100 100 100 100 100 Kapowsin Meats, Inc. Graham, Wash TOTAL CAPACITY — Historically tracked companies 438,780 444,320 447,920 Companies that have not been tracked 3,600 3,600 3,600 TOTAL U.S. HOG SLAUGHTER CAPACITY 442,380 447,920 451,520

<sup>\*2011</sup> data used for later years because companies declined to provide data in more recent years. Source: Paragon Economics, Inc. and National Hog Farmer, June 2014

# U.S. Packing Plant Closings — 1993-2013

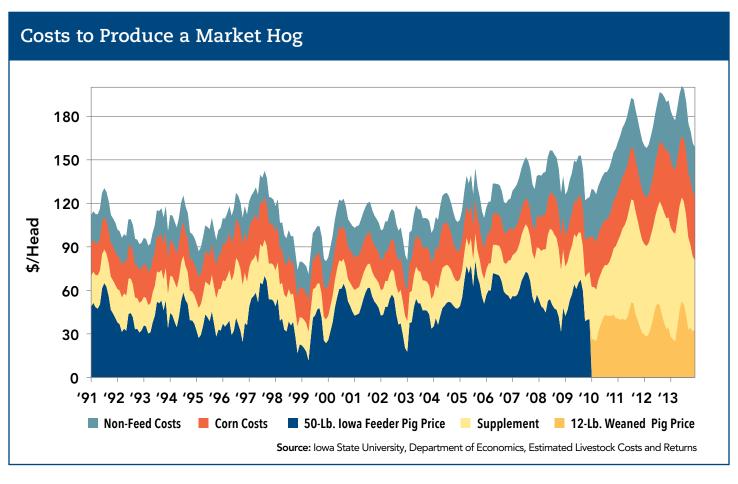
Company	Plant	Date Closed	Capacity
Swift	St. Joseph, Mo.	December 1993	10,000
Seaboard	Albert Lea, Minn.	February 1994	14,000
Thorn Apple Valley	Hyrum, Utah	1995	1,500
Reeves Packing	Áda, Ókla.	1995	400
Worthington Pack	Worthington, Ind.	April 1996	4,700
Premium Pork	Moultrie, Ga.	April 1996	4,700
Ohio Packing Co.	Columbus, Ohio	April 1996	900
IBP	Council Bluffs, Iowa	April 1997	7,300
Dakota Pork	Huron, S.D.	August 1997	5,850
Thorn Apple Valley	Detroit, Mich.	July 1998	14,000
Fisher Packing	Louisville, Ky.	1998	3,000
Field Packing	Owensboro, Ky.	July 1999	1,200
AVA Pork	Shamokin, Pa.	February 2000	2,500
Farmland	Dubuque, Iowa	June 2000	11,000
Brown Packing	Little Rock, Ark.	June 2000	600
Fineberg Packing	Memphis, Tenn.	February 2001	500
Excel	Marshall, Mo.	July 2001	8,000
Mosby Packing Co.	Meridian, Miss.	July 2001	400
AMPAC/Iowa Pack	Chicago, III.	December 2001	3,600
Hormel	Rochelle, III.	January 2003	7,100
Metzger Foods	Paduca, Ky.	March 2003	250
Simeus Foods	Forest City, N.C.	October 2003	300
America's Family Farms	Alcester, S.D.	November 2003	600
RC Pork (Pork Packers Int'l)	Downs, Kan.	May 2004	1,500
Smithfield Foods	Smithfield, Va.	September 2005	7,800
Bryan Foods (Sara Lea)	West Point, Miss.	March 2006	6,200
Lowell Packing	Fitzgerald, Ga.	June 2005	350
John Morrell	Sioux City, Iowa	April 2010	14,000
Southern Pride Meats	Goldsboro, N.C.	June 2010	210
Bob Evans Farms	Galva, III.	August 2010	330
Bob Evans Farms	Bidwell, Ohio	July 2011	220
Southern Pride Meats	Goldsboro, N.C.	July 2011	210
Cloverleaf Foods	Minot, N.D.	June 2011	600
J.C. Potter	Durant, Okla.	July 2012	400
Odom's Tennessee Pride	Little Rock, Ark.	April 2012	400
Avco	Gadsen, Ala.	April 2012	210
Bob Evans Farms	Richardson, Texas	October 2013	400
TOTAL CAPACITY			135,020

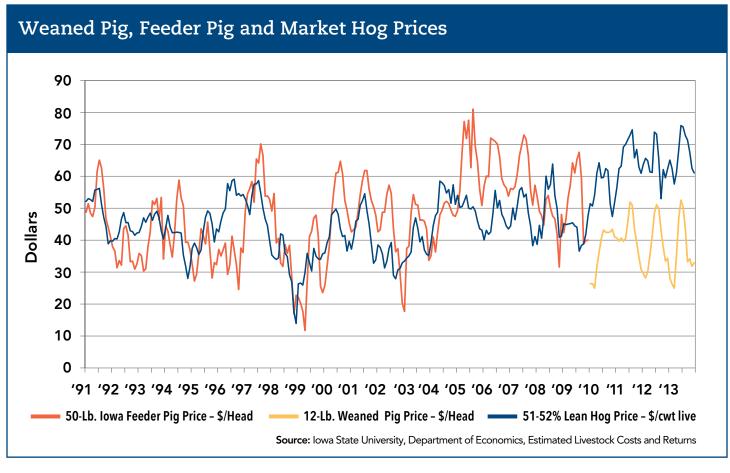
**Source:** Paragon Economics, Inc.

# Estimated Daily U.S. Slaughter Capacity – Sow Plants (head per day)

			Spri	ng 2012	Spri	ng 2013	Spri	ng 2014
Rank	Co.	Plant	Plant	Company	Plant	Company	Plant	Company
1	Johnsonville Sausage	Watertown, Wis.	700		750		750	
		Momence, III.	1,600		1,650		1,650	
		Holton, Kan.	1,000	3,300	1,000	3,400	1,000	3,400
2	Pine Ridge Farms	Des Moines, Iowa	3,200	3,200	3,200	3,200	3,200	3,200
3	Hillshire Brands (Jimmy Dean)*	Newbern, Tenn.	2,800	2,800	2,800	2,800	2,800	2,800
4	Pork King Packing	Marengo, III.	2,000	2,000	2,000	2,000	2,200	2,200
5	Abbyland Foods	Curtiss, Wis.	2,000	2,000	2,000	2,000	2,000	2,000
6	Bob Evans Farms	Xenia, Ohio	400		400		500	
		Hillsdale, Mich.	400		400		500	
		Richardson, Texas	400	1,200	400	1,200	Closed	1,000
7	Swaggerty Sausage Co.	Kodak, Tenn.	800	800	800	800	800	800
8	Calihan Packing Co.	Peoria, III.	450	450	450	450	750	750
9	Pioneer Packing Co.	Bowling Green, Ohio	425	425	425	425	425	425
10	F.B. Purnell Sausage	Simpsonville, Ky.	400	400	400	400	400	400
11	Williams Sausage Co.	Union City, Ky.	400	400	400	400	400	400
12	Wampler's Sausage	Lenoir City, Tenn.	300	300	300	300	300	300
13	Dean Sausage	Atalla, Ala.	300	300	300	300	300	300
14	Gunnoe Sausage	Goode, Va.	110	110	110	110	110	110
TOTA	L CAPACITY			17,685		17,785		18,085

**Source:** Paragon Economics, Inc.





# Hog-Corn Price Ratio

The hog-corn price ratio is a time-honored measure of pork production profitability, and it has been a good predictor of future production levels for many years. The reason it works is that feed represents 65 to 70 percent of the cost of producing a pig, while corn, or a close substitute such as grain sorghum or barley, makes up about 60 percent of total feed costs.

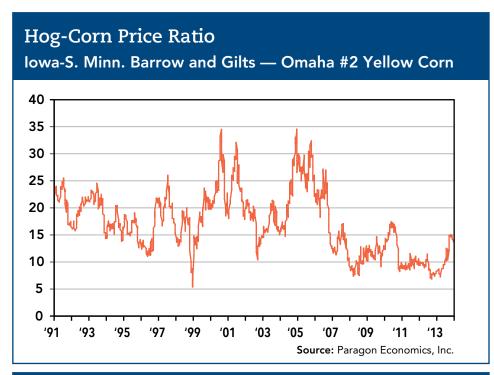
The hog-corn price ratio is the ratio of the market hog price in dollars per 100 pounds (cwt) live weight to the price of corn in dollars per bushel. So, if hogs are selling for \$70 per cwt and corn is \$3.50 per bushel, the hog-corn price ratio is 20.

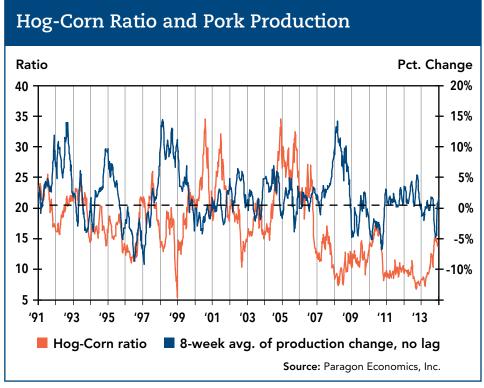
Historically, a hog-corn price ratio of 20 or greater suggested that pork production would exceed year-earlier levels 12 to 18 months later. Conversely, a hog-corn price ratio of 16 or less suggested that pork production would fall below year-earlier levels in 12 to 18 months.

This lead-lag relationship was once a function of grain producers' decisions on whether to sell corn or feed it to livestock. In this age of specialized production, many pork producers do not raise their own grain. However, the potential profitability indicated by the hog-corn price ratio is still a good indicator of the incentives that the marketplace provides producers to either expand or contract production.

It is clear from the chart on the right that higher corn values beginning in 2007 have changed the critical level of the hog-corn price ratio, with a ratio of 10:1 now appearing to be the demarcation between expansion and contraction of pork supplies.

Also, the reaction time of pork producers appears to have grown closer to two years. This is likely the result of the move to modern confinement facilities that cannot be built quickly and are usually slow to be emptied in times of financial losses.







# What Determines the Price of Hogs?

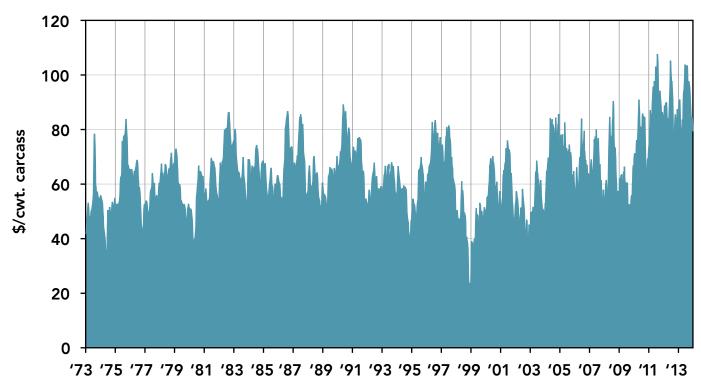
U.S. market hog prices are determined by the basic economic forces of supply and demand. The supply of hogs is determined by the price of production inputs and production technology, while market hog demand is derived from the demand for pork and other products from pigs.

The interaction of supply and demand results in prices that vary over time. The graph below demonstrates all of the forms of price variation – trend, cyclical and seasonal. Trends can be seen in the growth of hog prices during the 1970s, which were largely attributable to increasing meat demand and inflation. Hog prices trended downward during the

1990s as new technologies and lower grain prices reduced the average cost required to produce pigs. The uptrend of prices from 1998 to present is due to stronger export demand and, especially since 2006, higher costs that are primarily due to higher feed prices driven by ethanol.

Cyclical variation can be seen in the three- to four-year period between price peaks and lows. The hog cycle is caused by the biological lags inherent in pig production, producers' need for sufficient resources in order to expand and producers' natural tendency to try to endure hard times before reducing production.

### Iowa-Minnesota Market Hog Prices — Weekly



Source: USDA Agricultural Marketing Service

# U.S. Seasonal Pork Price Indexes

U.S. pork production and pig prices vary in a predictable manner during the calendar year. Such variation is called seasonality or seasonal variation. The graph below shows the seasonal indexes for both pork production and market hog prices from 1980 through 2013.

An index shows the percent of the annual average that prevails during a particular month. For example, July's seasonal production index of 91.3 percent and seasonal price index of 110.0 percent mean that, on average, July pork production will be about 91.3 percent of a year's monthly average production July pork prices about 110 percent of the average annual price.

Weather is a main driver of pork production levels. When considering seasonal factors, biological time lags (gestation period of about four months) and the feeding period (about six months) must be considered.

Breeding performance is better in cooler weather in the fall and winter. This results in more and larger litters farrowed (born) in the spring and early summer, with more pigs available for harvest the next fall and winter.

Conversely, higher temperatures cause poorer breeding performance in the spring and summer, resulting in fewer and smaller litters in the fall and winter and fewer market

hogs the following spring and summer.

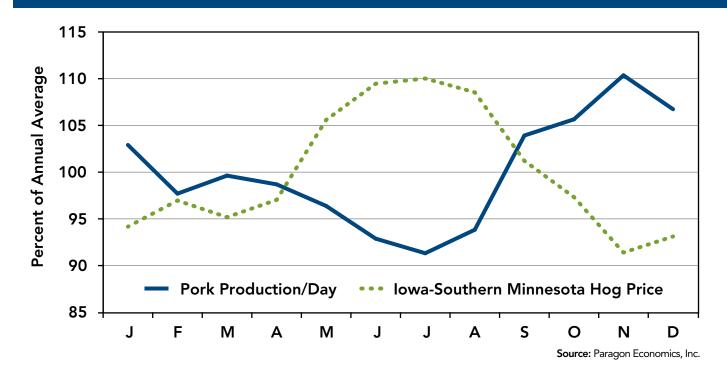
Pig growth rates also vary by season, largely because of feed intake variations. Pigs eat less during hot weather and grow slower, pushing marketings of some finisher hogs from summer into the fall. Higher feed intake in cooler months causes pigs to perform exceptionally well, pulling marketings forward in the spring. Both of these factors cause fewer pigs to reach market weights during the summer.

Pig prices follow a seasonal pattern opposite to what happens with pork production. But there are seasonal components to pork and hog demand as well. Summer grilling season increases the demand for loins, ribs, shoulders and pork trimmings, a major ingredient in hot dogs and other sausages. This strength helps pork and hog prices.

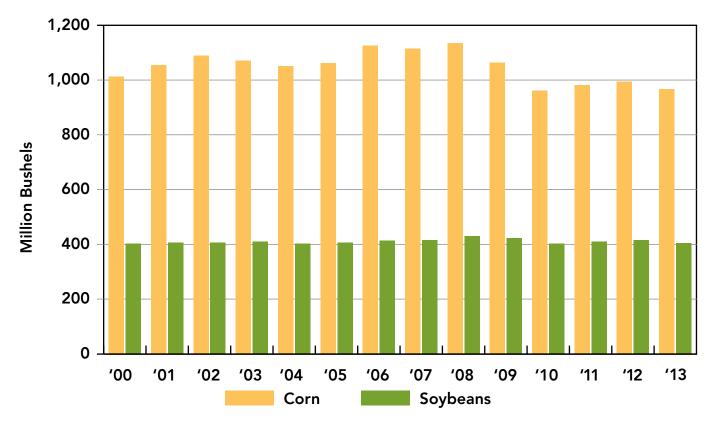
Pork bellies, the raw material for bacon, once contributed greatly to summer-demand strength with the popularity of BLTs. However, increased year-round use of bacon by foodservice operations has removed much of the seasonal variation in bacon use and belly prices.

Holiday ham demand causes ham prices to vary counter-seasonally to hog prices, with the year's lowest ham prices in the summer and the highest prices usually in October and November.

#### Seasonal Hog Supply and Price Indexes — 1980-2013





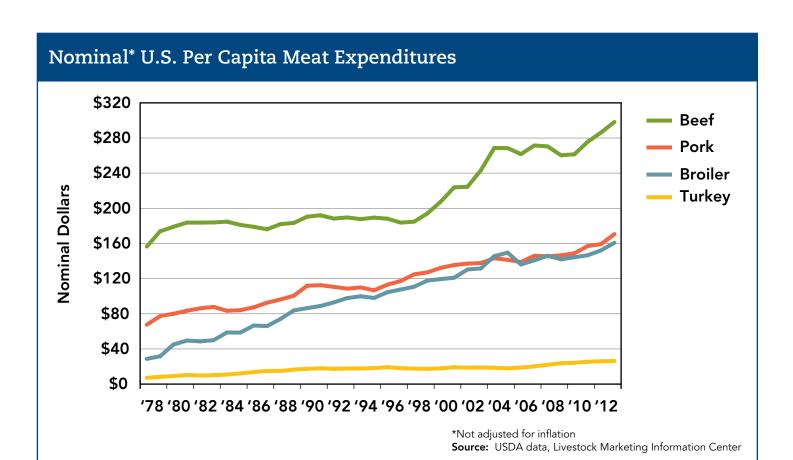


Note: Assumes DDGS were used for 10, 15, 20 and 25% of hog diets in 2008, 2009, 2010 and 2011-2014, respectively Source: Paragon Economics, Inc.

# U.S. Per Capita Meat Consumption

			Re	etail W	/eight (l	lbs.)					Bonel	ess Eq	uivalent	(lbs.)		
	Beef	Pork	Veal	Lamb		•	Fish	Total	Beef	Pork	Veal		Chicken		Fish	Total
1960		59.1	5.2	4.2	23.5	6.3	10.3	172.1	59.1	48.9	4.2	3.1	16.1	4.9	10.3	146.7
1961	65.5	56.7	4.8	4.5	26.0	7.4	10.7	175.6	61.0	47.1	3.9	3.3	17.8	5.9	10.7	149.6
1962	66.3	57.3	4.6	4.5	26.0	7.1	10.6	176.3	61.8	47.7	3.7	3.4	17.8	5.6	10.6	150.5
1963		58.4	4.1	4.3	27.2	6.9	10.5	181.7	65.5	48.9	3.4	3.2	18.6	5.5	10.5	155.5
1964		58.4	4.4	3.7	27.8	7.4	10.5	187.0	70.6	49.2	3.6	2.7	19.0	5.8	10.5	161.5
1965		51.8	4.4	3.3	29.8	7.5	10.9	182.5	70.6	43.8	3.6	2.4	20.4	6.0	10.9	157.7
1966		50.7	3.8	3.5	32.1	7.9	10.9	187.3	73.9	43.1	3.2	2.6	21.9	6.3	10.9	161.8
1967 1968		55.5 56.7	3.3 3.1	3.4 3.3	32.6 32.9	8.7 8.1	10.6 11.0	194.2 197.3	75.5 77.6	47.4 48.7	2.7 2.5	2.5 2.4	22.3 22.5	6.8 6.4	10.6 11.0	167.9 171.1
1969		55.0	2.7	3.1	34.9	8.4	11.2	197.3	77.6	47.5	2.3	2.4	24.1	6.6	11.2	171.1
1970	84.7	55.9	2.4	2.9	36.9	8.1	11.7	202.6	79.9	48.6	2.0	2.3	25.4	6.4	11.7	171.7
1971		60.6	2.2	2.8	36.7	8.4	11.5	206.3	79.2	53.0	1.8	2.1	25.1	6.6	11.5	179.3
1972		54.7	1.8	2.9	38.5	9.0	12.5	205.2	81.0	48.1	1.5	2.2	26.3	7.1	12.5	178.6
1973	80.8	49.0	1.4	2.4	37.0	8.4	12.7	191.6	76.2	43.4	1.2	1.7	25.2	6.7	12.7	167.0
1974	85.7	52.8	1.9	2.0	36.9	8.7	12.1	200.1	80.8	47.1	1.5	1.5	25.1	6.9	12.1	175.0
1975	88.2	43.0	3.4	1.8	36.7	8.3	12.1	193.5	83.2	38.5	2.8	1.3	25.0	6.5	12.1	169.5
1976		45.5	3.2	1.6	39.9	8.9	12.9	206.7	89.2	41.1	2.7	1.2	27.1	7.0	12.9	181.2
1977		47.0	3.1	1.5	40.7	8.8	12.6	205.5	86.5	42.6	2.6	1.1	27.7	6.9	12.6	180.0
1978	87.5	47.0	2.4	1.4	43.1	8.7	13.4	203.5	82.5	42.8	1.9	1.0	29.2	6.9	13.4	177.8
1979		53.7	1.6	1.3	46.0	9.3	13.0	203.1	73.7	49.1	1.3	1.0	31.7	7.3	13.0	177.2
1980		57.3	1.5	1.4	45.8	10.3	12.5	205.4	72.3	52.6	1.2	1.0	31.7	8.1	12.5	179.3
1981		54.7	1.6	1.4	46.9	10.6	12.7	206.1	73.8	50.4	1.3	1.0	32.4	8.4	12.7	180.1
1982 1983		49.1 51.7	1.6	1.5 1.5	47.0 47.4	10.6 11.0	12.5 13.4	199.4	72.7 74.1	45.3 47.8	1.3 1.3	1.1 1.1	32.6 32.9	8.4 8.7	12.5 13.4	173.9 179.3
1983		51.7	1.6 1.7	1.5	47.4	11.0	14.2	205.2 207.7	74.1	47.6	1.4	1.1	34.2	8.7	14.2	179.3
1985		51.9	1.8	1.4	51.0	11.6	15.1	212.1	74.8	48.1	1.5	1.1	35.4	9.2	15.1	185.1
1986		49.0	1.8	1.4	52.0	12.9	15.5	211.5	74.6	45.6	1.5	1.0	36.1	10.2	15.5	184.5
1987		49.2	1.5	1.3	55.1	14.7	16.2	211.9	69.7	46.0	1.2	1.0	38.3	11.6	16.2	184.1
1988	72.7	52.5	1.3	1.4	55.3	15.7	15.2	214.1	68.7	49.2	1.1	1.0	38.6	12.4	15.2	186.3
1989	69.0	52.0	1.2	1.4	56.7	16.6	15.6	212.5	65.3	48.8	1.0	1.0	39.7	13.1	15.6	184.6
1990	67.8	49.7	1.1	1.4	59.5	17.6	15.0	212.1	64.1	46.7	0.9	1.0	41.6	13.9	15.0	183.3
1991	66.6	50.2	1.0	1.4	62.0	17.9	14.9	214.0	63.1	47.2	8.0	1.0	43.4	14.2	14.9	184.6
1992		52.8	1.0	1.3	65.6	17.9	14.8	219.6	62.7	49.6	0.8	1.0	45.8	14.2	14.8	188.9
1993		51.9	0.9	1.3	68.0	17.7	15.0	219.5	61.2	48.8	8.0	1.0	47.4	14.0	15.0	188.2
1994	66.3	52.5	0.9	1.2	68.8	17.8	15.2	222.7	63.1	49.3	0.8	0.9	48.1	14.1	15.2	191.4
1995		51.8	1.0	1.2	68.0	17.8	15.0	221.3	63.7	48.6	0.8	0.9	47.6	14.0	15.0	190.6
1996 1997		48.4 47.9	1.2 1.0	1.1 1.1	69.4 71.4	18.4 17.3	14.8 14.6	220.4 219.0	64.2 62.8	45.4 45.0	1.0 0.8	0.8	48.5 50.1	14.5 13.7	14.8 14.6	189.3 187.7
1997		51.5	0.8	1.1	71.4	17.3	14.9	219.0	63.8	48.4	0.8	0.8	50.1	14.0	14.9	193.0
1999		52.7	0.7	1.1	76.3	17.7	15.4	231.4	64.6	49.5	0.6	0.7	53.5	13.9	15.4	198.2
2000		51.2	0.7	1.1	76.9	17.3	15.2	230.2	64.7	48.1	0.5	0.8	53.9	13.7	15.2	197.0
2001		50.2	0.6	1.1	76.6	17.5	14.8	227.3	63.3	47.2	0.5	0.8	53.7	13.8	14.8	194.2
2002		51.5	0.6	1.2	80.5	17.7	15.6	234.8	64.6	48.4	0.5	0.9	56.4	14.0	15.6	200.4
2003		51.9	0.6	1.1	81.4	17.4	16.3	233.6	61.9	48.6	0.5	0.8	57.1	13.7	16.3	198.9
2004		51.5	0.5	1.1	84.5	17.1	16.6	234.4	63.3	48.3	0.4	8.0	59.2	13.5	16.6	202.2
2005		50.1	0.5	1.1	86.0	16.7	16.2	233.1	62.7	47.0	0.4	0.8	60.2	13.2	16.2	200.6
2006		49.5	0.4	1.1	86.7	16.9	16.5	234.0	63.0	46.5	0.4	0.8	60.7	13.4	16.5	201.3
2007		50.8	0.4	1.1	85.3	17.6	16.3	233.8	62.4	47.8	0.3	0.8	59.8	13.9	16.3	201.3
2008		49.5	0.4	1.0	83.5	17.6	16.0	227.6	59.7	46.5	0.3	0.7	58.5	13.9	16.0	195.8
2009		50.2	0.4	1.0	79.8	17.0	16.0	222.4	58.4	47.1	0.3	0.7	55.9	13.4	16.0	192.0
2010		47.8	0.4	0.9	82.4	16.4	15.8	220.4	57.0	44.9	0.3	0.7	57.7	13.0	15.8	189.4
2011		45.7	0.4	0.8	82.9	16.1	15.0	215.5	54.8	43.0	0.3	0.6	58.1	12.7	15.0	184.5
2012 2013		46.0 46.8	0.3	0.9	80.4	16.0	14.4 N/A	212.6	54.9 53.0	43.2	0.3	0.6	56.3 57.4	12.6	14.4 N/A*	182.3
2013	50.4	46.8	0.3	0.9	81.9	16.0	N/A	213.9	53.9	44.0	0.3	0.7	57.4	12.6	N/A*	183.2

Sources: Livestock and poultry – Livestock Marketing Information Center, Denver, Colo.; Fish – Fisheries of the United States, www.st.nmfs.noaa.gov/st1/ \*2012 per capita fish consumption is the most recent data available and is used for 2013 to compute a total per capita protein consumption estimate.



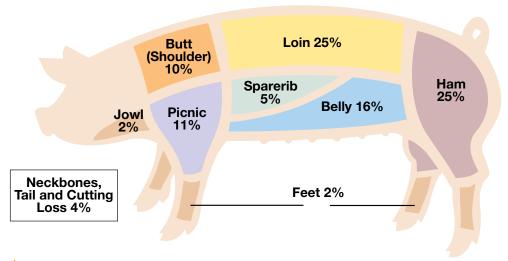
# Nominal\* U.S. Per Capita Meat Expenditures

	Beef	Pork	Broiler	Turkey
1978	156.38	67.51	28.67	7.13
1979	173.91	77.43	31.62	8.32
1980	178.97	79.97	45.08	9.11
1981	183.69	83.42	49.50	10.33
1982	183.75	86.19	48.62	9.80
1983	183.91	87.84	49.88	10.12
1984	184.80	83.41	58.67	10.91
1985	181.19	84.08	58.57	12.20
1986	178.92	87.44	66.67	13.73
1987	176.18	92.66	65.94	14.92
1988	182.01	96.25	74.11	15.02
1989	183.38	100.53	83.89	16.39
1990	190.44	111.88	86.38	17.44
1991	192.10	112.56	88.87	17.89
1992	188.32	110.60	92.98	17.38
1993	189.64	108.61	97.88	17.73
1994	187.67	110.02	99.90	17.82
1995	189.43	106.67	97.94	18.20

	Beef	Pork	Broiler	Turkey
1996	188.25	113.04	104.47	19.20
1997	183.73	117.25	107.59	18.18
1998	184.79	124.87	110.72	17.59
1999	194.27	127.14	117.78	17.43
2000	207.64	132.26	119.52	17.89
2001	223.91	135.48	121.00	19.24
2002	224.48	137.03	130.47	18.66
2003	243.21	137.72	131.56	18.86
2004	268.65	143.22	145.47	18.56
2005	268.51	141.50	149.61	17.95
2006	261.69	138.92	136.14	18.78
2007	271.51	145.92	140.85	20.20
2008	270.38	145.39	145.91	22.03
2009	260.35	146.53	142.01	23.67
2010	261.46	148.79	144.37	24.24
2011	275.67	157.03	146.56	25.45
2012	286.28	159.29	152.16	25.96
2013	298.22	170.65	160.84	26.27

# Wholesale USDA Prices for Pork Sub-primals

Primal Cuts	Sub-Primal Cuts	2012 Annual Average (dollars per pound)	2013 Annual Average (dollars per pound)	Year-to-Year Percent Change
Butt (Shoulder)	1/4″ Trim Butt Vacumm-Packed	1.05	1.02	-2%
Primal, various styles,	1/8" Trim Steak Ready Butt Vacumm-Packed	1.21	1.15	-4%
10% of carcass	1/4" Trim Boneless Butt Vacumm-Packed*	n/a	1.19	n/a
	1/4″ Trimmed Loin Vacumm-Packed	1.19	1.17	-2%
	1/8″ Trimmed Loin Vacumm-Packed	1.30	1.24	-4%
	Boneless Center-cut Strap-on	1.56	1.56	0%
Loin	Boneless Center-cut Strap-off	1.71	1.76	3%
Primal, various styles, 25% of carcass	Boneless Sirloin	1.20	1.21	1%
25% of carcass	Bone-in Sirloin	0.86	0.83	-3%
	Tenderloin	2.54	2.52	-1%
	Backribs 2.0 Lbs. or More	2.47	2.18	-12%
	17 to 20 Lbs. Trimmed Selected Ham	0.76	0.83	10%
	20 to 23 Lbs. Trimmed Selected Ham	0.74	0.79	6%
******	23 to 27 Lbs. Trimmed Selected Ham	0.73	0.78	7%
Ham	4 Muscle Ham to Blue	1.25	1.27	2%
Primal, various styles, 25% of carcass	Insides*	n/a	1.33	n/a
23 % Of Carcass	Outsides*	1.29	1.33	3%
	Knuckles*	n/a	1.30	n/a
	Outer Shank*	n/a	0.86	n/a
Picnic	SS Smoker Trim Picnic, Vacumm-Packed	0.69	0.83	21%
Primal, various styles,	RS Smoker Trim Picnic Combo*	0.67	0.66	-2%
11% of carcass	Picnic Cushion Meat, Vacumm-Packed	n/a	1.16	n/a
1170 01 carcass	SS Smoker Trim Picnic, 1 Pc Vacumm-Packed*	n/a	0.94	n/a
	42% Trim Combo	0.45	0.48	6%
Trim	72% Trim Combo	0.65	0.69	6%
Primal, various styles	72% Trim Boxed, Frozen*	0.70	0.77	11%
10-30% of carcass	Picnic Meat Combo Cushion Out*	0.79	0.85	7%
	Trim with Trace Combo*	0.42	0.42	-2%
Spareribs	Trimmed Sparerib – Light	1.45	1.46	1%
Primal, various styles	Trimmed Sparerib – Medium	1.40	1.42	1%
5% of carcass	St Louis Spareribs, Vacumm-Packed*	n/a	2.15	n/a
0,0 01 careass	BBQ Style Spareribs, Vacumm-Packed*	n/a	1.64	n/a
	Derind Belly 9 to 13 Lbs.*	n/a	1.86	n/a
Belly	Derind Belly 13 to 17 Lbs.*	n/a	1.84	n/a
Primal, various styles	Derind Belly 17 to 19 Lbs.*	n/a	1.75	n/a
16% of carcass	Skin-on Belly 12 to 14 Lbs.	1.17	1.55	33%
	Skin-on Belly 14 to 16 Lbs.	1.19	1.45	22%



Note: Primal yields include trim, fat, skin, bone, shrink. Total yields do not calculate to 100% due to other products derived from carcass (jowl, neckbones, tail, feet, cutting loss). Trim yield is approximate due to various styles of cutting primals.

Prior to April 2013, prices from the voluntary report were used (USDA Weekly National Carlot Meat Report).

\*A number of new items have been added to this report, some of which were not available in the voluntary report.

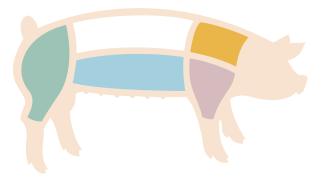
Source: Steiner Consulting Group using data from USDA's Agricultural Marketing Service Report, LM-PK610

# A Typical Market Pig Today

# **Typical Market Pig**

Live weight (lbs.)	.274.6
Carcass weight (lbs.)	.207.5
Backfat, 10th rib (inches)	0.7
Loin-eye area (square inches)	7.8
Percent Lean	54.8
Lean meat (lbs.)	.113.7

### A 275-pound Live Pig **Produces a 208-Pound Carcass**

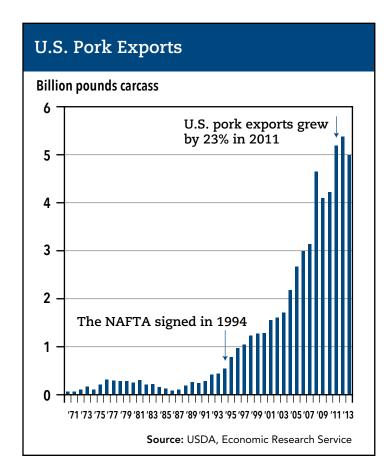


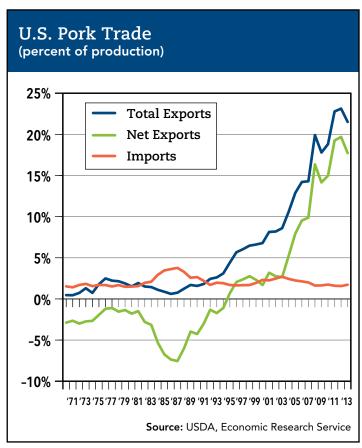
Figures are averages taken from actual cutting tests. Carcass data vary, depending on cutting method and type of pig.

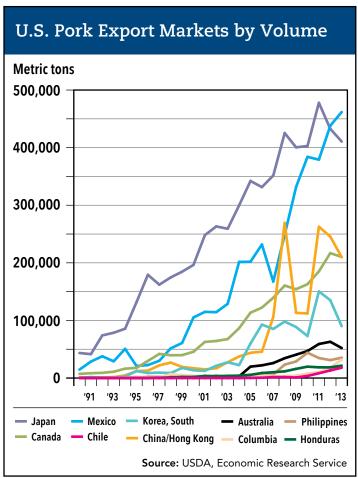
Cuts	Retail Pork*	Other Products	Carcas Total
Ham (50.7 lbs.)			
Cured ham	29.6		
Fresh ham	2.4		
Trimmings Skin, fat, bone	6.0	14.6	
Fotal	38.0	14.6	52.6
Loin (46.0 lbs.)			
Backribs	3.6		
Boneless Ioin	16.6		
Sirloin roast	6.4		
Tenderloin	2.1 13.5		
Trimmings Fat and bone	13.5	5.5	
Total	42.2	5.5	47.7
Side (28.1 lbs.)			
Cured bacon	16.0		
Spare ribs	7.9		
Trimmings Fat	4.3	1.0	
Гоtal	28.1	1.0	29.2
Shoulder (21.4 lbs.)			
Blade steaks	6.1		
Blade roast	10.9		
Trimmings	2.2	2.0	
Fat <b>Fotal</b>	19.2	3.0 3.0	22.2
Picnic (21.6 lbs.)			
Boneless picnic meat	16.1		
Skin, fat, bone		6.3	
Гotal	16.1	6.3	22.4
Miscellaneous (32.2 l	bs.)		
Jowls, feet, tail, neckbones, etc.	13.1		
Fat, skin, bone	10.1	18.3	
Shrink and loss		2.1	
Гotal	13.1	20.3	33.4

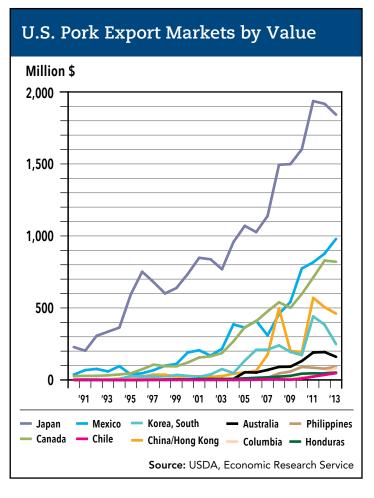
Retail cuts on semi-boneless basis. Fully boneless would show lower retail weights.

Source: National Pork Board and Paragon Economics, Inc.









U.S. Pork Exports and Net Exports

	Million	Lbs., Carcass	Weight <sup>1</sup>	Thousand Met	ric Tons, Produ	uct Weight²
	Imports	Exports	Net Exports	Imports	Exports	Net Exports
1970	491.0	68.0	-423.0	_	_	_
1971	496.0	72.0	-424.0	_	_	_
1972	538.0	106.0	-432.0	_	_	_
1973	533.0	172.0	-361.0	_	_	_
1974	488.0	105.0	-383.0	_	_	_
1975	439.0	211.0	-228.0	_	_	_
1976	469.1	316.2	-152.9	_	_	_
1977	439.6	293.8	-145.7		_	_
1978	495.2	287.7	-207.6	_	_	_
1979	499.4	290.7	-208.8	_	_	_
1980	549.7	251.8	-297.9	<del>-</del>	_	_
1981	541.4	307.0	-234.4	_	_	_
1982	612.1	214.3	-397.8	_	_	_
1983	698.7	219.3	-479.4			
1984 1985	953.9	163.9 128.4	-790.0 -999.4		_	_
1985	1,127.8 1,121.6	85.7	-999.4 -1,035.9		_	_
1986	1,121.6	109.3	-1,035.9	_	_	_
1987	1,195.1	109.3	-1,065.6 -942.0			_ _
1989	895.8	268.3	-942.0 -627.5	346.0	92.8	 -253.1
1989	898.0	243.1	-627.3 -654.9	348.7	82.2	-266.5
1990	774.9	289.8	-485.1	307.5	94.0	-213.5
1992	645.5	419.9	-225.7	258.2	140.3	-117.9
1993	740.3	446.4	-293.8	295.2	148.3	-146.9
1994	743.8	548.5	-195.3	296.7	177.4	-119.3
1995	664.3	787.5	123.2	268.9	263.8	-5.0
1996	619.7	969.9	350.2	251.8	306.5	54.7
1997	634.1	1,043.6	409.6	261.3	324.1	62.8
1998	705.4	1,230.1	524.7	289.6	399.9	110.3
1999	827.1	1,277.1	450.0	345.9	434.3	88.4
2000	966.6	1,286.7	320.1	410.3	438.1	27.9
2001	950.7	1,559.5	608.7	404.2	528.1	123.8
2002	1,070.7	1,612.2	541.5	454.9	550.0	95.1
2003	1,185.2	1,716.7	531.5	505.3	578.2	72.9
2004	1,099.5	2,180.5	1,081.1	469.4	747.4	278.0
2005	1,023.8	2,666.1	1,642.3	436.6	905.9	469.2
2006	989.7	2,995.1	2,005.4	418.1	1,017.6	599.5
2007	968.4	3,141.2	2,172.7	408.8	1,052.2	643.5
2008	831.9	4,651.5	3,819.6	350.2	1,566.8	1,216.6
2009	833.8	4,094.1	3,260.3	356.7	1,397.9	1,041.2
2010	859.5	4,224.0	3,364.6	367.3	1,436.3	1,069.0
2011	803.4	5,189.4	4,385.9	343.8	1,436.3	1,092.5
2012	801.7	5,383.3	4,581.6	345.2	1,811.5	1,466.3
2013	879.4	4,992.3	4,112.9	346.6	1,436.3	1,089.6

**Source:** <sup>1</sup>USDA Economic Research Service <sup>2</sup>USDA Foreign Agricultural Service

# World Per Capita Pork Consumption – 2014 (lbs., carcass weight)

	Country	2011	2012	2013	2014		Country	2011	2012	2013	2014
1	Montenegro	99.4	102.9	85.1	98.3	28	Macedonia	22.0	27.2	27.2	29.5
2	China/HK/Macau	84.3	88.2	91.5	93.9	29	Panama	25.3	24.9	27.4	28.7
3	European Union	91.5	89.6	88.5	93.2	30	Dominican Republic	23.3	23.9	24.7	26.3
4	Serbia	83.8	85.1	87.1	88.0	31	Trinidad and Tobago	19.8	21.4	23.0	25.2
5	Belarus	86.5	91.8	93.8	84.9	32	Kazakhstan	30.0	27.3	25.9	25.2
6	Taiwan	87.5	86.0	83.1	81.3	33	Albania	19.5	21.2	23.8	23.4
7	South Korea	65.8	68.1	71.4	72.4	34	Argentina	19.4	19.4	22.3	23.3
8	Switzerland	71.6	69.7	71.7	72.2	35	Angola	16.8	17.7	17.6	20.2
9	United States	59.0	59.3	60.4	59.1	36	Armenia	11.9	15.6	19.3	20.2
10 11	Norway Chile	58.3 52.0	56.2 54.3	56.8 54.7	56.1 55.2	37	Bosnia and Herzegovina	14.9	15.5	18.4	19.4
12	Vietnam	53.0	53.6	54.2	53.0	38	Cote d'Ivoire	9.9	12.2	16.8	17.5
13	Cuba	54.6	54.7	53.9	52.3	39	Gabon	13.8	14.9	15.8	17.1
14	Ukraine	38.9	46.1	48.1	51.0	40	Georgia	11.3	13.7	15.8	16.5
15	Australia	47.6	49.6	48.6	50.2	41	Korea, North	15.4	15.4	15.3	15.3
16	Russia	46.8	49.4	50.2	49.5	42	Colombia	9.6	10.2	11.3	12.5
17	Canada	51.3	52.9	50.8	49.2	43	Croatia	13.5	13.9	13.7	12.2
18	The Bahamas	48.1	41.5	40.9	47.9	44	South Africa	10.6	10.5	10.0	11.0
19	Moldova	42.7	44.0	45.8	46.7	45	Guatemala	10.8	10.5	10.1	10.8
20	Ecuador	45.6	44.6	45.3	46.4	46	Venezuela	10.5	10.4	9.7	10.2
21	Singapore	48.5	51.0	46.5	45.9	47	Haiti	9.0	9.1	9.0	9.3
22	Japan	43.5	44.2	44.1	43.9	48	Kyrgyzstan	10.0	9.4	8.5	8.7
23	New Zealand	44.0	44.7	42.9	43.6	49	Honduras	9.9	9.2	9.3	8.5
24	Uruguay	28.0	31.2	34.3	37.7	50	Jamaica	7.3	7.3	7.3	6.8
25	Mexico	31.6	33.7	35.2	35.6	51	El Salvador	1.6	1.8	2.0	2.0
26	Philippines	33.2	33.0	34.1	32.0	52	Ghana	2.0	1.9	2.0	2.0
27	Brazil	29.6	29.6	29.7	29.7						

 $\textbf{Source:} \ \ \mathsf{Paragon} \ \mathsf{Economics, Inc., using \ data \ from \ the \ \mathsf{USDA} \ \mathsf{Foreign} \ \mathsf{Agricultural \ Service, \ CIA \ World \ \mathsf{Factbook}.$ 

# World Meat/Poultry Consumption Shares – 2011 **Beef 23%** Poultry 35% Mutton and Goat 5% **Pork 37%** Source: Food & Agricultural Organization (http://faostat3.fao.org/faostat-gateway/go/to/download/FB/BL/E) Note: 2011 is the most recent year for which data are available

# Top 20 Markets for U.S. Pork Exports 2013 (ranked by quantity)

# Pork Exports (product weight)

Partner	2013 Value \$1,000	2013 Quantity Metric Tons
Mexico	979,113	461,873
Japan	1,842,287	410,578
Canada	820,695	210,204
China/Hong Kong	460,907	209,757
Korea, South	249,113	90,093
Australia	160,800	52,054
Philippines	91,569	35,364
Colombia	82,724	31,943
Honduras	51,477	21,531
Dominican Republic	41,973	18,124
Chile	47,140	17,989
Ukraine	41,106	14,601
Taiwan	26,408	12,000
Panama	25,695	10,432
Guatemala	25,422	9,402
New Zealand	22,877	8,082
Singapore	22,645	7,646
Russia	15,729	5,317
Bahamas, The	12,562	4,541
Costa Rica	12,328	3,988
	Mexico Japan Canada China/Hong Kong Korea, South Australia Philippines Colombia Honduras Dominican Republic Chile Ukraine Taiwan Panama Guatemala New Zealand Singapore Russia Bahamas, The	Partner         \$1,000           Mexico         979,113           Japan         1,842,287           Canada         820,695           China/Hong Kong         460,907           Korea, South         249,113           Australia         160,800           Philippines         91,569           Colombia         82,724           Honduras         51,477           Dominican Republic         41,973           Chile         47,140           Ukraine         41,106           Taiwan         26,408           Panama         25,695           Guatemala         25,422           New Zealand         22,877           Singapore         22,645           Russia         15,729           Bahamas, The         12,562

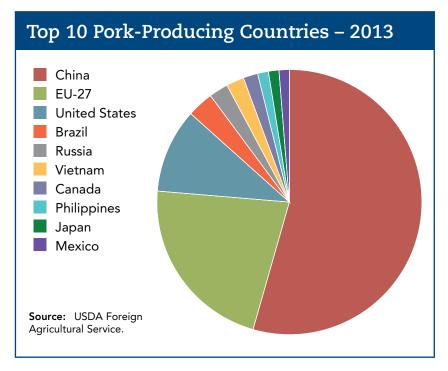
# Pork Variety Meat Exports (product weight)

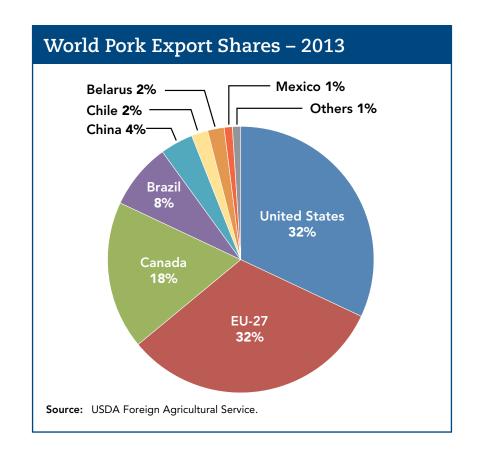
		2013 Value \$1,000	2013 Quantity Metric Tons
1	China/Hong Kong	392,131	192,337
2	Mexico	196,768	148,179
3	Canada	17,524	16,256
4	Philippines	18,974	14,327
5	Japan	35,126	14,085
6	Singapore	20,519	9,375
7	Korea, South	16,414	6,603
8	Taiwan	12,663	5,782
9	Chile	11,302	5,692
10	Panama	3,726	2,860
11	Colombia	3,678	1,926
12	Cuba	3,923	1,789
13	Guatemala	1,767	1,120
14	Albania	1,897	988
15	Honduras	1,257	957
16	Trinidad and Tobago	1,457	668
17	Dominican Republic	1,150	568
18	Australia	996	477
19	El Salvador	602	368
20	New Zealand	280	119

Source: USDA Foreign Agriculture Service

Top 10 Pork-Producing Countries – 2013							
Thousand Metric Tons							
1	China	55,620					
2	EU-27	22,390					
3	United States	10,530					
4	Brazil	3,280					
5	Russia	2,400					
6	Vietnam	2,220					
7	Canada	1,820					
8	Philippines	1,350					
9	Japan	1,309					
10	Mexico	1,281					

Source: USDA Foreign Agricultural Service.





# Canada Plays An Important Role in U.S. Hog and Pork Markets

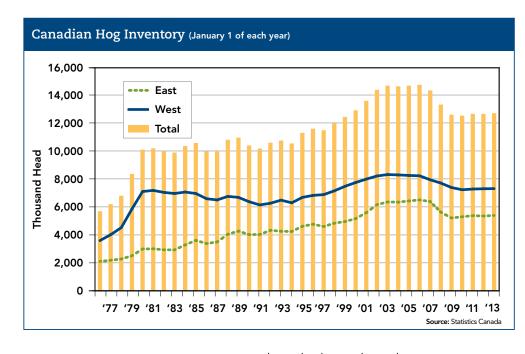
Canada has long had a vibrant pork industry that has depended heavily on exports for many years. Canada's 32.6 million people consume slightly less pork per capita than its U.S. neighbors, with a domestic market for only about 1.9 billion pounds of carcass-weight pork per year. In 2013, Canada produced 4.01 billion pounds of pork, carcass weight, and exported 2.75 billion pounds, breaking 2012's record of 2.62 billion pounds. Canada imported 578 million pounds of U.S. pork in 2013, down slightly from 587 million pounds in 2012.

Canada exported 4.96 million live hogs to the United States for feeding and/or harvest in 2013. Of the total, 4.16 million were feeder pigs (about 45 lbs.) or weaned pigs (10 to 12 lbs.) that were fed to market weight in the United States. The other 798,000 head were market-weight hogs or culled sows and boars headed to U.S. packing plants.

Canada's pork industry grew rapidly from 1995 to 2004. The breeding herd increased by over 50 percent, litters farrowed by 70 percent and pigs born by 83 percent. The larger numbers for farrowings and pigs born indicated a dramatic increase in productivity. This growth was driven by two major developments.

The repeal of transportation subsidies on grain shipments from the Prairie Provinces (Saskatchewan, Manitoba and Alberta) to the Pacific Coast, Ontario and Quebec drove grain prices lower in the prairies and encouraged livestock production. Due to supply controls, neither the dairy nor poultry sectors could grow, so the pork sector, and to a lesser degree, beef sector, took advantage of the opportunity.

Also, the Canadian dollar lost substantial value from 1997 through 2001. Canadian hog prices are U.S. hog prices converted into Canadian dollars. So when the Canadian dollar loses value relative to the U.S. dollar, Canadian



producers see more Canadian dollars when they sell pigs whether the sale is to a U.S. or Canadian packing plant.

About half of Canadian pork producers' production costs (mostly feed) rose due to the cheaper Canadian dollar. The weaker dollar caused all revenue to rise but only about half of costs. Canadian producers had higher profits as the Canadian dollar weakened and increased the breeding herd and output.

But conditions changed dramatically starting in 2002. The Canadian dollar strengthened steadily until flattening in late 2007 when the Canadian dollar was worth about \$1.03 U.S. With the exception of the recession of mid-2008 through mid-2010, the Canadian dollar has been near par with the U.S. dollar ever since.

The increase reduced 100 percent of Canadian producers' income while reducing only about 50 percent of costs, driving profits lower. Canadian producers also have dealt with higher grain and oilseed prices that have plagued U.S. producers since late 2006, gaining a slight advantage in 2012 due to very good Canadian

wheat, barley and canola crops.

Canada's breeding herd shrank 26 percent from 1.597 million head in January 2005 to 1.188 million head in January 2013. The breeding herd is estimated to have increased marginally to 1.192 million head during 2013.

Canada's contribution to U.S. hog supplies has declined. After a peak of 10.04 million head in 2007, imports of pigs from Canada fell to 5.74 million in 2010 before growing slightly in 2011 and then declining to 4.96 million in 2013, the lowest level since 2001.

The Canadian pig import decline has been exacerbated by the U.S. mandatory country-of-origin labeling (MCOOL) law that went into effect in 2008. The law makes handling pork from pigs born in Canada and fed in the United States or born and fed in Canada more expensive and difficult for U.S. packers, processors and retailers. The World Trade Organization (WTO) ruled the program illegal in 2011. A U.S. appeal was rejected in 2012. USDA has promulgated new rules aimed at bringing MCOOL into compliance with WTO terms, with a decision expected in 2015.

# Canadian Hog/Pork Production

Year	Pork Production¹ (thousand metric tons)	Hog Slaughter¹ (thousand head)	Hog Slaughter¹ (million head)	Sow Herd¹ (Jan. 1 thousand head)	Farrowings <sup>2</sup> (thousand head)	Pigs Born¹ (thousand head)
1976	643	8,969	8.969	563	579	9,575
1977	648	9,037	9.037	627	1,220	9,800
1978	741	9,938	9.938	733	1,487	11,799
1979	889	12,001	12.001	912	1,796	14,050
1980	1,034	13,978	13.978	1,076	1,842	14,550
1981	1,015	13,692	13.692	1,071	1,798	14,000
1982	1,006	13,458	13.458	1,026	1,798	14,000
1983	1,030	13,703	13.703	1,037	1,887	15,000
1984	1,044	13,886	13.886	1,087	1,961	15,800
1985	1,088	14,452	14.452	1,069	1,917	15,350
1986	1,097	14,444	14.444	1,010	1,938	15,225
1987	1,131	14,735	14.735	1,020	2,064	16,606
1988	1,188	15,439	15.439	1,080	2,115	17,103
1989	1,184	15,439	15.439	1,077	2,057	16,527
1990	1,034	14,683	14.683	1,021	1,987	15,972
1991	1,008	14,323	14.323	1,020	2,005	16,480
1992	1,111	15,468	15.468	1,058	2,002	17,028
1993	1,098	15,202	15.202	1,079	1,914	16,567
1994	1,131	15,476	15.476	1,093	2,046	17,898
1995	1,174	15,771	15.771	1,128	2,113	18,614
1996	1,130	15,178	15.178	1,091	2,105	18,668
1997	1,156	15,385	15.385	1,130	2,226	19,911
1998	1,282	16,943	16.943	1,229	2,481	22,542
1999	1,439	18,921	18.921	1,248	2,669	24,715
2000	1,509	19,684	19.684	1,297	2,767	25,968
2001	1,593	20,702	20.702	1,361	2,996	28,205
2002	1,709	22,140	22.140	1,468	3,148	29,695
2003	1,730	22,444	22.444	1,527	3,314	31,421
2004	1,780	22,872	22.872	1,576	3,483	33,242
2005	1,765	22,320	22.320	1,597	3,435	33,020
2006	1,748	21,789	21.789	1,571	3,330	32,351
2007	1,746	21,269	21.269	1,532	3,257	32,032
2008	1,786	21,706	21.706	1,445	3,116	31,274
2009	1,794	21,807	21.807	1,316	2,902	29,410
2010	1,779	21,296	21.296	1,227	2,789	28,613
2011	1,812	21,262	21.262	1,193	2,689	28,500
2012	1,840	21,283	21.283	1,194	2,633	28,346
2013	1,820	20,929	20.929	1,188	2,559	27,390
2014*	1,820	20,800	20.800	1,192	n/a	27,300

<sup>\*2014</sup> Forecasts from USDA-FAS

Source: <sup>1</sup> USDA Foreign Agricultural Service <sup>2</sup> Statistics Canada

# Canadian Hog/Pork Exports

	Live Exports¹ (< 50 kg head)	Live Exports¹ (> 50 kg head)	Exports of Live Pigs <sup>2</sup> (head)	Total Pigs	Pork Exports¹ (thousand metric tonnes³)
1976			44,984	44,984	51
1977			43,347	43,347	59
1978			187,966	187,966	72
1979			131,192	131,192	102
1980			237,590	237,590	149
1981			147,344	147,344	164
1982			305,294	305,294	208
1983			459,303	459,303	201
1984			1,346,472	1,346,472	224
1985			1,152,442	1,152,442	251
1986			512,183	512,183	272
1987			427,591	427,591	301
1988	146,963	716,588		863,551	319
1989	170,568	835,140		1,005,708	305
1990	204,985	684,903		889,888	314
1991	225,856	837,781		1,063,637	270
1992	226,308	443,861		670,169	296
1993	280,813	556,611		837,424	303
1994	401,541	513,002		914,543	301
1995	650,748	1,096,003		1,746,751	366
1996	766,974	2,010,864		2,777,838	384
1997	987,287	2,188,633		3,175,920	420
1998	1,466,077	2,655,872		4,121,949	433
1999	2,083,426	2,052,625		4,136,051	554
2000	2,335,848	2,018,517		4,354,365	660
2001	3,168,770	2,152,298		5,321,068	728
2002	3,757,366	1,966,268		5,723,634	864
2003	4,974,044	2,458,173		7,432,217	975
2004	5,623,494	2,881,478		8,504,972	972
2005	5,416,249	2,774,218		8,190,467	1,084
2006	6,013,546	2,749,832		8,763,378	1,081
2007	6,720,515	3,283,802		10,004,317	1,033
2008	7,036,493	2,311,441		9,347,934	1,129
2009	5,221,439	1,143,114		6,364,553	1,123
2010	4,699,916	1,049,184		5,749,100	1,159
2011	4,800,747	993,854		5,794,601	1,197
2012	4,794,338	862,064		5,656,402	1,243
2013	4,159,814	798,454		4,958,268	1,246

<sup>1</sup> Source: USDA, Agricultural Marketing Service2 Breakdown of exports by > or < 50kg not available prior to 1988</li>

