

Grain Price OUTLOOK

A joint publication of the Department of Agricultural Economics, College of Agriculture, Purdue University, West Lafayette, Indiana, and the Department of Agricultural and Consumer Economics, College of Agricultural, Consumer and Environmental Sciences, University of Illinois at Urbana-Champaign.

2005: ANOTHER GREAT HOG YEAR?

JANUARY 2005

Chris Hurt

2005 – No. 1

Summary

It's going to be another great hog year in 2005. At least that is the outlook at the advent of the sixth year of the century. How good is it going to be ... maybe the best in the last 16 years.

So, what's the downside? Let me remind you that the January forecast one year ago was for 2004 to be a year filled with financial losses with a combination of low hog prices and expensive feed. The outlook for losses in 2004 turned out to be way off, and the forecast for a great 2005 could also be distinctly off-base.

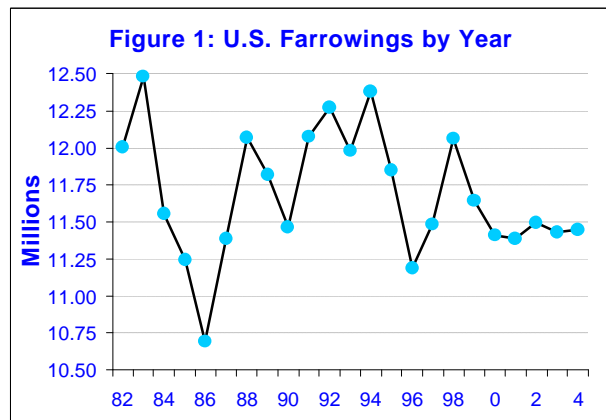
The two big reasons analyst missed the outlook a year ago were the dramatic reduction in feed costs after March of 2004 and the strength of pork demand. Pork supplies rose by 3 percent yet prices were an amazing 33 percent higher. Therefore, to suggest the market can repeat an extraordinary 2004 may be skating on thin ice, but that is the best forecast at this point.

The latest hog inventory data from USDA shows that producers have a slightly smaller breeding herd and that they intend to keep farrowings at roughly year-previous levels this winter and next spring. If so, supplies will only be up about a percent, mostly as a result of higher market weights. If demand can hold reasonably close to last year, prices could average in the low \$50. Costs are expected to

be in the higher \$30s, so that provides a lot of positive margin for producers.

The Numbers and Canada

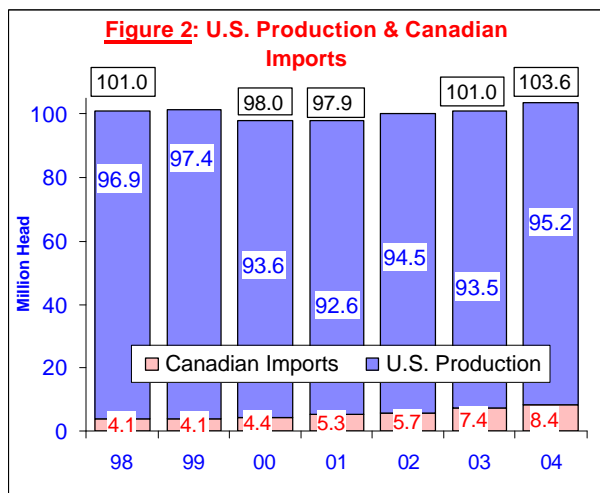
Data from the December Hogs and Pigs report are shown in Table 1. It was a surprise that the breeding herd had dropped by .7 percent relative to the previous year. This was especially true since the breeding herd had been up by 1 percent in the September report. Generally, once the breeding herd begins to expand, producers stay on that path for four to six quarterly reports.



However, U.S. producers have exhibited much different behavior around the hog cycle this decade. Figure 1 illustrates annual farrowings in the U.S. There have been wide swings across the cycles. As an example, in 1983 farrowings reached 12.5 million sows, but by 1986 they had dropped to 10.75 million,

a decrease of 14 percent. Strong cyclical production continued in the 1990s. The increase in farrowings of about 11.2 million in 1996 to 12.1 million in 1998 represented an 8 percent increase. However, since 2000 U.S. farrowings have been little changed, ranging from 11.4 to 11.5 million head, which is less than a 2 percent variation.

The growth in the North American pork industry this decade has been a combination of both Canada and the U.S. The primary source of pig production increases has been Canada, while the primary source of growth in finishing and slaughter has been the U.S. Figure 2 demonstrates that while the U.S. breeding herd has been very stable this decade, total slaughter in the U.S. has increased from 98 million in 2000 to 103.6 million in 2004. The difference is the increase in pigs imported from Canada. Since 1998, the number of sows in Canada increased by 29 percent which represents about a 5 percent increase relative to the size of the U.S. breeding herd. Imports of hogs and pigs from Canada since 2000 have increased by four million head from 4.4 million in 2000 to 8.4 million in 2004.



Among the fundamental questions over the next five years is whether the growth of the North American industry will be in the U.S. or Canada. Several factors support some shifting of that growth back toward the U.S. The first is that Canadian farmers, animal producers, and provincial governments have generally

promoted animal industries as growth industries since the mid-1990s. At that time, the Crow Rate rail subsidies to export grain out of the prairie provinces was repealed. This had the impact of lowering grain prices and was cause for Canadian agriculture to look for value adding opportunities. Livestock was a natural. However, the Canadian growth in animal production meant they had to become dependent on animal and animal product exports. This is fine as long as markets are open, but the experience with BSE and now the anti-dumping duties on hogs may make them re-think the implications of such a high dependence on exports. Secondly, the exchange rate of the Canadian dollar has risen about 25 percent since the end of 2002. This means that the incentive to sell hogs and pigs in the U.S. is greatly diminished. The U.S. dollar has fallen to historic low levels, but huge U.S. budget deficits and growing trade deficits suggest that the U.S. dollar may continue to drop even more. A third reason is the current expanding recognition of U.S. hog producers that they may have a chance to make some money in coming years. These factors may help shift the expansion preference back to the U.S.

Pork Supplies and Prices

Pork production is expected to rise by about 1 percent in 2005. The number of hogs available for slaughter is expected to increase by only .4 percent, but carcass weights are expected to rise by .7 percent. Cheap corn and soybean meal will cause producers to add more weight to hogs. In fact, weights may actually be up more than 1 percent this year if the low priced corn years of 1999, 2000, and 2001 are repeated. In each of those years, U.S. calendar-year corn prices were below \$2.00 (\$1.89, \$1.86, and \$1.89) and weights were up each respective year by 1.0 percent, 1.8 percent, and 1.1 percent.

By quarter, production is expected to rise by about 1 percent in each quarter except for the second quarter when supplies are expected to be up about 2 percent. The final quarter of 2005 deserves special mention as the most vulnerable to error. Remember that producers

indicate that spring farrowing will be unchanged. However, it is more likely that some expansion will occur in spring farrowings and that supplies will actually be up 2 to 4 percent in the final quarter of 2005.

Prices shown below and in Table 5 are forecasts from computer models. Live weight prices for 51 to 52 percent lean hogs are expected to average near \$50 in the first quarter, rise toward the mid-\$50s in the second quarter, and then average in the lower \$50s in the last-half of the year. More expansion in supplies by that final quarter could dampen prices to the mid-to-higher \$40 for that final quarter. For the year, hog prices are expected to average around \$51.50, which is just \$1.00 lower than in 2004.

PRODUCTION

Year	Quarter	Production Million#s	Percent Change vs. Year-Ago
2001	I	4,805	-0.4
	II	4,546	1.5
	III	4,548	-1.3
	IV	5,239	4.6
		19,138	1.2
2002	I	4,779	-0.5
	II	4,800	5.6
	III	4,832	6.2
	IV	5,290	1.0
		19,701	2.9
2003	I	4,898	2.5
	II	4,741	-1.2
	III	4,807	-0.5
	IV	5,499	4.0
		19,945	1.2
2004	I	1,530	4.7
	II	4,897	3.3
	III	5,046	5.0
	IV	5,472	-0.5
		20,545	3.0
2005	I	5,169	0.8
	II	5,956	1.2
	III	5,147	2.0
	IV	5,506	0.6
		20,778	1.1

PRICES

Year	Quarter	Live Weight Price \$/cwt.	Percent Change vs. Year-Ago
2001	I	42.83	4.1
	II	52.05	3.2
	III	51.05	10.0
	IV	37.30	-8.5
		45.81	2.5
2002	I	39.43	-7.9
	II	34.99	-32.8
	III	33.86	-33.7
	IV	31.39	-15.8
		34.92	-23.8
2003	I	35.38	-10.3
	II	42.64	21.9
	III	42.90	26.7
	IV	36.88	17.5
		39.45	13.0
2004	I	44.18	24.9
	II	54.91	28.8
	III	56.58	31.9
	IV	54.85	48.7
		52.63	33.4
2005	I	49.92	13.0
	II	54.32	-1.1
	III	51.12	-9.7
	IV	50.85	-7.3
		51.55	-2.0

Important to 2005 prices is the question of the strength in demand for the year compared to last year when demand strength came from high consumer incomes, consumer interest in high protein diets, added exports due to the restricted beef exports, and narrow packer and retail margins. For 2005, income growth is expected to remain favorable, there seems to be somewhat less interest in the high protein diets, we will probably start shipping beef again, and marketing margins will widen. In general, these will tend to dampen demand somewhat from 2004.

Profit Outlook Best Since 1990

Sometimes, if too many analysts make a certain prediction, that prediction does not come true. But, here goes anyway. "My forecast is that 2005 will be the most profitable hog production year since 1990." Costs of production are estimated at \$38.50 per live hundredweight and hog prices at \$51.50. This would provide a profit of \$13 per live hundredweight the best annual return since

1990, at \$11.50 per live hundredweight. By quarter, the best returns are expected in the spring quarter and the lowest returns may come in the final quarter of 2005, especially if more expansion arrives by the fall.

As shown in Figure 3, the huge loss of -\$15.59 per live hundredweight in the fall quarter of 1998 was finally offset by a similar positive quarter when estimated profits were +\$17.49 in the final quarter of 2004. Unfortunately, many fewer pork producers had the thrill of the "boom" quarter in 2004 than experienced the "bust" quarter of 1998.

Implications for the Industry

Animal protein is popular again and consumers have the income to buy what they like. The Canadian industry probably will not elect to continue to grow as rapidly in the next five years, and this is going to provide the U.S. industry with a window of expansion opportunity. The unusual unfolding of numerous events which made 2004 such a good year still has many producers believing they will have to awaken to harsher realities in 2005. However, while some components of the strong demand may wane in 2005, the overall outlook stays very positive, led by low cost feed and hog prices that could still top \$50 per live hundredweight for an average.

The corn outlook remains one of abundant stocks, weaker than expected export demand, and anticipation of more acres in 2005 with some shifting from soybean acres. My forecast is that the odds of yields dropping low enough to trigger U.S. average farm prices above \$2.20 for the 2005 crop are only about 20 percent. Of course, other analysts will have different forecasts and yields are driven by weather which can be highly variable. The point, however, is that low priced corn is fairly likely for the 2005 crop as well.

What about early thoughts on soybean meal for 2005. Soybean rust gets most of the attention, and will lead to maybe three to 5 percent lower acreage. The yield loss is not known and will depend primarily on the spread of the disease, the weather during July and

August, and the treatment effectiveness by U.S. farmers. However, for purposes of establishing a benchmark for discussion, a 4 percent reduction in acreage with a 3 percent reduction in yields from trend would provide a crop near 2.8 billion bushels and may reduce ending stocks of beans for the 2005 crop to around 375 million bushels compared to 435 million for the 2004 crop. These are still large stocks and soybean meal prices would rise some from the \$150 to \$165 range (Decatur, Illinois) USDA is using for the 2004 crop. The increase might be in the range of \$10 to \$15 per ton.

January and February may be good times to book meal for use into the spring and summer, especially if the South American crop is large. By early spring, uncertainty surrounding the growing season tends to stimulate buyers and prices, especially with the rust uncertainties this year. This summer, announcements of soybean rust may cause some initial upward surges in prices. These could be stronger initially due to having not had experience with rust. In the longer run, rust may not have as large of impact on yields as early fears.

I still look for hog expansion to finally take off in 2005. This makes 2006 and 2007 vulnerable price years and encourages more consideration of hedging lean hogs. It is likely that spring and summer 2005 hog prices will be quiet strong and this may provide favorable hedging opportunities at that time for hogs that will go to market in the fall or 2005 into 2006.

Issued by Chris Hurt
Extension Economist
Purdue University

Table 1. Hogs and Pigs in the United States, December 1, 2004

	2003	2004	2004 as % of 2003
	thousand head		percent
Inventory			
All hogs and pigs	60,444	60,501	100.1
Kept for breeding	6,009	5,969	99.3
Kept for market	54,434	54,531	100.2
Market hogs by weight			
Under 60 pounds	19,778	19,636	99.3
60-119	13,238	13,439	101.5
120-179	11,109	11,286	101.6
180 and over	10,311	10,171	98.6
Sows farrowing			
Sept 04 - Nov 04	2,856	2,852	99.9
Dec 04 - Feb 05 ¹	2,836	2,855	100.7
March 05 - May 05 ¹	2,870	2,868	99.9
Pigs saved per litter			
June 04 - Aug 04	8.90	9.01	101.2
Sept 04 - Nov 04	8.93	8.96	100.3
Pig crop			
June 04 - Aug 04	25,974	26,010	100.1
Sept 04 - Nov 04	25,488	25,558	100.3

¹ Intentions

Table 2. U.S. Market Hogs Weighing 60 to 179 Pounds on Dec 1 (previous year)^c, and Commercial Slaughter in Calendar Quarter from January through March

	<i>1,000 Hd Inventory</i>	<i>1,000 Hd Slaughter</i>	<i>Ratio</i>
1990	21,856	21,883	100.1
1991	21,847	21,508	98.4
1992	23,351	23,802	101.9
1993	23,266	23,057	99.1
1994	22,871	22,746	99.5
1995	24,028	24,229	100.8
1996	23,510	23,650	100.6
1997	22,402	22,342	99.7
1998	24,507	24,776	101.1
1999	25,216	25,571	101.4
2000	24,180	25,019	103.5
2001	23,779	24,578	103.4
2002	23,668	24,148	102.0
2003	23,908	24,654	103.1
2004	24,347	25,713	105.6
2005 ^a	24,725	25,615	103.6

^a Projected

^b Mean of previous three years

^c December of previous year

Table 3. U.S. Sow Farrowings and Pig Crop Compared to U.S. Commercial Slaughter (1,000 head), with 7-month Lag 1993 to 2005

Year	Sows Farrow	Pig Crop	Ratio	Year	Commercial Slaughter	
					Ratio	
June-August				January-March		
1993	2,972	24,041	8.09	1994	22,746	94.6
1994	3,107	25,547	8.22	1995	24,229	94.8
1995	2,976	24,813	8.34	1996	23,650	95.3
1996	2,718	23,244	8.55	1997	22,342	96.1
1997	2,946	25,696	8.72	1998	24,776	96.4
1998	3,054	26,634	8.72	1999	25,579	96.0
1999	2,920	25,862	8.86	2000	25,019	96.7
2000	2,889	25,548	8.84	2001	24,578	96.2
2001	2,878	25,539	8.87	2002	24,148	94.6
2002	2,883	25,725	8.92	2003	24,654	95.8
2003	2,918	25,974	8.90	2004	25,713	99.0
2004	2,888	26,010	9.01	2005 ^a	25,792	99.2
September-November				April-June		
1993	2,982	24,003	8.05	1994	22,965	95.7
1994	2,997	24,517	8.18	1995	23,646	96.5
1995	2,815	23,479	8.34	1996	22,201	94.6
1996	2,731	23,327	8.54	1997	21,834	93.6
1997	2,939	25,494	8.67	1998	23,631	92.7
1998	2,993	25,902	8.66	1999	24,292	93.8
1999	2,844	24,973	8.78	2000	23,105	92.5
2000	2,838	25,112	8.85	2001	23,280	92.7
2001	2,889	25,492	8.82	2002	24,280	95.2
2002	2,833	25,094	8.86	2003	23,922	95.3
2003	2,856	25,488	8.93	2004	24,735	97.0
2004a	2,852	25,558	8.96	2005 ^a	24,729	96.8
December-February				July-September		
93/94	2,885	23,368	8.10	1994	23,673	101.3
94/95	2,886	23,851	8.27	1995	23,264	97.5
95/96	2,735	23,054	8.43	1996	22,711	98.5
96/97	2,684	23,164	8.63	1997	22,679	97.9
97/98	2,929	25,480	8.70	1998	25,038	98.3
98/99	2,891	25,247	8.73	1999	24,960	98.9
99/00	2,798	24,522	8.76	2000	24,097	98.3
00/01	2,748	23,963	8.72	2001	23,635	98.6
01/02	2,835	24,857	8.77	2002	25,120	101.1
02/03	2,769	24,400	8.81	2003	24,747	101.4
03/04	2,836	25,105	8.85	2004	25,813	102.8
04/05a	2,855	25,352	8.88	2005 ^d	26,116	103.0
March-May				October-December		
1993	3,220	26,135	8.12	1993	24,574	94.0
1994	3,390	27,984	8.26	1994	26,322	94.1
1995	3,170	26,373	8.32	1995	25,198	95.5
1996	2,930	24,833	8.48	1996	23,833	96.0
1997	2,911	25,229	8.67	1997	25,152	99.7
1998	3,086	26,989	8.75	1998	27,584	102.2
1999	2,986	26,272	8.80	1999	26,723	101.7
2000	2,885	25,565	8.86	2000	25,714	100.6
2001	2,870	25,509	8.89	2001	26,470	103.8
2002	2,941	26,001	8.84	2002	26,715	102.7
2003	2,886	25,629	8.88	2003	27,608	107.7
2004	2,870	25,633	8.93	2004	27,321	106.6
2005 ^a	2,868	25,697	8.96	2005	27,352	106.4

^a Estimates

^b Mean of previous three years including Canadian live imports (not shown).

Table 4. U.S. Commercial Slaughter, Carcass Weights, and Quarterly Pork Production 1992-2005

Year	Quarter	Commercial Slaughter (1,000 head)	Carcass Weight Per Hog	Pork Production (million #'s)	Percent Change Year-Ago
1992	I	23,802	181.5	4,321	10.7
	II	22,202	181.7	4,033	6.4
	III	23,746	179.6	4,264	11.6
	IV	25,138	181.7	4,567	3.0
1993	I	23,057	182.5	4,207	-2.6
	II	22,661	183.2	4,151	2.9
	III	22,777	181.7	4,138	-3.0
	IV	24,573	184.5	4,534	-0.7
1994	I	22,746	183.9	4,182	-0.6
	II	22,965	184.6	4,240	2.1
	III	23,673	182.7	4,326	4.5
	IV	26,322	186.6	4,913	8.4
1995	I	24,229	185.2	4,488	7.3
	II	23,646	185.8	4,394	3.6
	III	23,264	182.3	4,240	-2.0
	IV	25,198	186.1	4,690	-4.5
1996	I	23,650	185.6	4,389	-2.2
	II	22,201	184.9	4,104	-6.6
	III	22,711	182.4	4,143	-2.3
	IV	23,833	186.7	4,449	-5.1
1997	I	22,342	187.7	4,194	-4.4
	II	21,834	187.4	4,091	-0.3
	III	22,666	185.0	4,196	1.3
	IV	25,152	189.5	4,766	7.1
1998	I	24,776	189.2	4,688	11.8
	II	23,631	187.5	4,429	8.3
	III	25,038	184.7	4,625	10.2
	IV	27,523	188.9	5,239	9.9
1999	I	25,571	190.3	4,865	3.8
	II	24,292	190.6	4,630	4.5
	III	24,960	187.2	4,672	1.0
	IV	26,732	191.2	5,110	-2.5
2000	I	25,019	192.8	4,824	-0.8
	II	23,107	193.8	4,478	-3.3
	III	24,097	191.1	4,606	-1.4
	IV	25,714	194.8	5,010	-2.0
2001	I	24,578	195.5	4,805	-0.4
	II	23,280	195.3	4,546	1.5
	III	23,635	192.4	4,548	-1.3
	IV	26,470	197.9	5,239	4.6
2002	I	24,148	197.9	4,780	-0.5
	II	24,280	197.6	4,797	5.5
	III	25,120	192.4	4,832	6.2
	IV	26,715	196.7	5,255	0.3
2003	I	24,654	198.7	4,898	2.5
	II	23,922	198.2	4,741	-1.2
	III	24,747	194.2	4,807	-0.5
	IV	27,608	199.2	5,499	4.6
2004	I	25,713	199.5	5,130	4.7
	II	24,735	198.0	4,897	3.3
	III	25,713	196.2	5,046	5.0
	IV ^P	27,321	200.3	5,472	-0.5
2005	I ^{ac}	25,705	201.1	5,169	0.8
	II ^a	24,729	200.4	4,956	1.2
	III ^a	26,116	197.1	5,147	2.0
	IV ^{ac}	27,352	201.3	5,506	0.6

^a Projected

^c Average of the two estimation methods (Table 2 and 3)

^P Preliminary

Table 5. Actual and Forecast Hog Prices, Lean Carcass Prices, and Retail Pork Prices^a

Year	Quarter	Barrow and Gilts 6-Mkt Price (\$/cwt)	Lean Value (Live Price/74 yield) (\$/carcass cwt)	Retail Pork ¢/carcass cwt
1992	I	\$38.68	\$52.27	198.9
	II	\$44.83	\$60.58	195.9
	III	\$43.86	\$59.27	200.6
	IV	\$41.84	\$56.54	197.0
1993	I	\$43.96	\$59.41	194.6
	II	\$46.83	\$63.28	194.3
	III	\$47.49	\$64.18	200.2
	IV	\$43.23	\$58.42	201.3
1994	I	\$45.19	\$61.07	200.8
	II	\$42.44	\$57.35	198.8
	III	\$40.07	\$54.15	199.0
	IV	\$30.56	\$41.30	193.6
1995	I	\$38.19	\$51.61	191.6
	II	\$38.57	\$52.12	190.2
	III	\$48.32	\$65.30	195.6
	IV	\$42.86	\$57.92	201.8
1996	I	\$45.33	\$61.26	206.3
	II	\$54.84	\$74.11	214.9
	III	\$57.96	\$78.32	230.4
	IV	\$55.10	\$74.46	231.9
1997	I	\$51.06	\$69.00	231.0
	II	\$56.41	\$76.23	229.7
	III	\$54.45	\$73.58	234.5
	IV	\$43.69	\$59.04	231.0
1998	I	\$34.74	\$46.95	233.0
	II	\$39.42	\$53.27	226.9
	III	\$33.95	\$45.88	231.0
	IV	\$19.30	\$26.08	226.9
1999	I	\$28.83	\$38.96	235.8
	II	\$35.18	\$47.54	238.4
	III	\$35.70	\$48.24	246.4
	IV	\$36.29	\$49.04	245.2
2000	I	\$41.14	\$55.59	249.8
	II	\$50.43	\$68.15	257.3
	III	\$46.43	\$62.74	264.3
	IV	\$40.78	\$55.11	261.3
2001	I	\$42.83	\$57.88	262.5
	II	\$52.05	\$70.34	267.0
	III	\$51.05	\$68.99	275.0
	IV	\$37.30	\$50.41	273.0
2002	I	\$39.43	\$53.28	270.9
	II	\$34.99	\$47.28	267.7
	III	\$33.86	\$45.76	264.1
	IV	\$31.34	\$42.35	260.2
2003	I	\$35.38	\$47.81	260.9
	II	\$42.64	\$57.62	262.2
	III	\$42.90	\$57.97	269.8
	IV	\$36.89	\$49.85	270.2
2004	I	\$44.18	\$59.70	269.3
	II	\$54.91	\$74.20	276.8
	III	\$56.58	\$76.46	287.7
	IV ^P	\$54.85	\$74.12	282.3
2005	I ^a	\$49.92	\$67.46	
	II ^a	\$54.32	\$73.41	
	III ^a	\$51.12	\$69.08	
	IV ^a	\$50.85	\$68.72	

^a Predicted prices for 2005 (I) forward are made with two equations with the results averaged.

^P Preliminary