Hog Producers Near the End of Losses

January 2003 **Chris Hurt**

Last year was another tough one for many hog producers unless they had contracts that kept the prices they received much above the average spot price. In 2002, hog slaughter reached 100.3 million head, the second highest annual count after the 101.6 million head of 1999. Pork production set a new high record at 19.7 billion pounds, surpassing the previous high of 19.3 billion pounds in 1999.

Prices were depressed in 2002. The annual average price for 51% to 52% lean hogs on a live weight basis was $34.90 per hundredweight, $11 lower than in 2001. Another element in the discouragement was an increase in estimated production costs by about $1.50 per live hundredweight to an estimated $38.60. Estimated losses for average costs farrow-to-finish producers taking spot prices were estimated at $3.70 per hundredweight. The largest estimated losses occurred in the last two quarters when they averaged $6.10 and $8.20 per hundredweight.

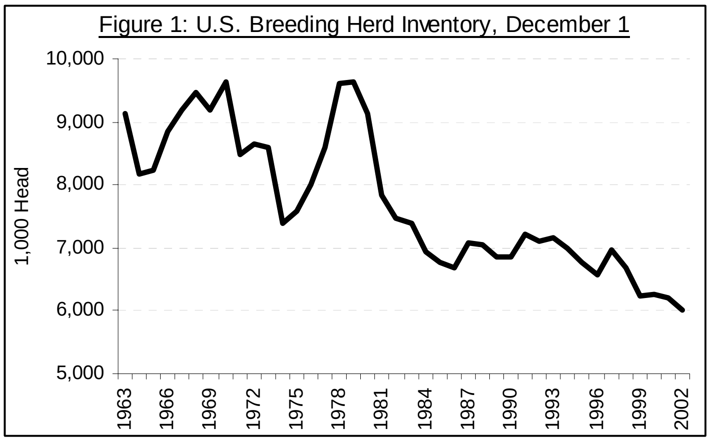
For the new year of 2003, price and profit prospects are considerably brighter. Slaughter is expected to drop to 97.9 million head, a 2.4% reduction. Pork production is estimated at 19.4 billion pounds, a 1.6% reduction. Prices for 51% to 52% lean hogs on a live basis are expected to increase to near $40 for the year; however costs are expected to be modestly higher as a result of tight old crop corn and soybean stocks, and new crop feed prices which are not expected to drop back to the 1998-2001 crop lows. The year of 2003 as a whole is expected to be slightly profitable with the best returns occurring in the late spring and summer.

Most importantly, the breeding herd is dropping and will result in smaller pork supplies after the first quarter of the year. Movement to an even smaller breeding herd can be expected throughout 2003, with pork supplies continuing to drop through the first-half of 2004. Assuming that the lowest quarterly prices of this cycle came in the final quarter of 2002, then the highest prices would be expected in the summer of 2004 although they could be high enough to provide profits from the spring of 2003 through the summer of 2004.

Producers who have “held-on” this long, should likely stay in business as the end of the loss period is expected by next spring. Those farrow-to-finish producers wanting to leave the industry might consider liquidating in a manner so that their last market hogs are sold near the end of the summer of 2004.

The Numbers

The size of the U.S. breeding herd is continuing to come down. Sow slaughter moved above year previous levels in April of 2002 and reached its peak at nearly 20% over the previous year in July and August. In the last-half of 2002, sow slaughter averaged about 12% greater than the same period one year earlier. As a result, USDA reported that the breeding herd had dropped 3.2% by December 1. The total number of animals in the herd stood at only 6.0 million, the lowest number since USDA began tracking the breeding herd in 1963. The steady decline in the size of the breeding herd is shown in **Figure 1.**



The market herd however was down only 1.2%, primarily because of the pigs that were born this past fall. In the weight breakdowns, pigs that were 60 to 179 pounds on December 1 were unchanged, but those under 60 pounds were down 2.2%. This means that slaughter supplies will be nearly unchanged in January and February, but could begin to drop in March.

Farrowings in the fall of 2002 were down by 2.5%, and the pigs per litter were constant at 8.83 pigs per litter. Intentions for the winter quarter are down 1% and the spring quarter are down 3%.

Demand Should Improve

Not only will pork supplies drop in 2003, but the demand environment should also improve. While there remains much uncertainty at the start of the year with regard to Iraq, North Korea, and terrorist threats, the tone of the general economy is expected to show positive signs as the year progresses. Economic growth as measured by real GDP was up an estimated 2.3% in 2002, and is expected to rise by 2.6% in 2003 (Source: Survey of Professional Economist, Philadelphia Federal Reserve Bank, http://www.phil.frb.org/files/spf/survq402.html). Higher economic growth rates in the U.S. should help stimulate more meat consumption. Incomes worldwide are also expected to grow at an increasing rate. In 2001, world real economic growth was 1.1%, followed by 1.7% in 2002, with an expectation of 2.6% growth in 2003. Japan, our largest pork customer, is finally expected to see a positive year of economic growth after declining the past two years.

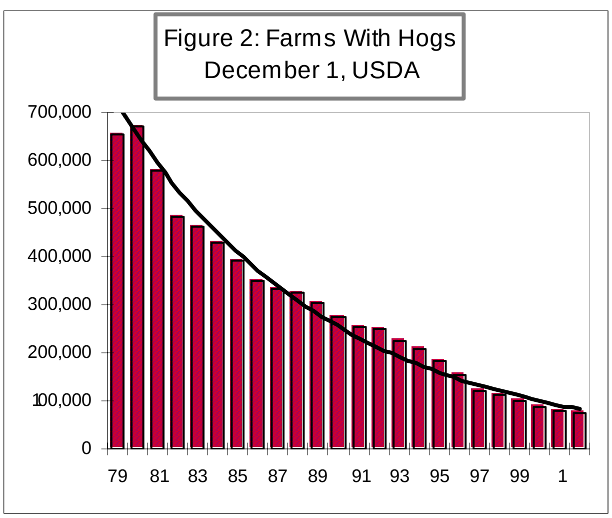
Perhaps more important to hog prices will be a reduction in supply pressure from other meats and poultry. USDA is currently expecting beef production to drop by 5.5%, with chicken production up only 1.4%, and turkey unchanged. Added together with the decline of 1.6% in pork production, total meat and poultry production is anticipated to drop by 1.6%. A decline in total U.S. production of meat and poultry is a rare occurrence. The last time this occurred was in 1982. A drop of 1.6% in total meat and poultry production means about a 2.5% drop in per capita supplies.

Pork exports in 2002 increased by nearly 4% with strong purchases from South Korea (+73%), Japan (+6%), and Canada (+5%). USDA is currently estimating that pork exports will expand another 2% for 2003. The slower growth rate is expected to be related to higher U.S. pork prices.

Hog Farm Saga Continues

It's an old song by now, farmers are leaving the hog business and the big are getting bigger, **(Figure 2**). In 2002, the number of farmers that had hogs sometime during the year declined by an additional 7% dropping from 80,880 in 2001 to 75,350 in 2002. Again, it was the small farms that left the industry. Of the decline of 5,530 hog farms, a total of 5,013 were under 500 head of inventory.

Even greater reductions of hog farms can be expected in the 2003 and 2004. In fact, it tends to be the two years following a financial loss year when hog farm numbers drop by the greatest percentage. By 2005, the number of hog farms can be expected to drop by an additional 25% to 30%.



While many focus on the farms leaving the business, there are growth sectors. Those farms with 2,000 to 4,999 head of inventory grew by 170 farms or 3.5%, and the very largest farms with 5,000 or more head of inventory grew by 59 farms or 2.7%.

Today, farms with 2,000 or more head of hogs represent only 9.6% of all hog farms, but have 75% of the total hog inventory.

The influence of very large hog production businesses is clear. Businesses which own 50,000 or more hogs represented 49% of the U.S. hog inventory on December 1. Those with ownership of 20,000 to 49,999 hogs represented an additional 7% of inventory, and businesses that owned 10,000 to 19,999 hogs represented another 7.5% of U.S. inventory. Thus in sum, those hog production businesses that own 10,000 or more hogs represented 63.5% of the U.S. hog inventory.

Supplies and Prices

Supplies of pork will remain somewhat above year-ago levels in January and February, before beginning to recede in March as the smaller fall pig crop comes to market. If farrowing intentions are down as anticipated this winter and next spring, slaughter levels will remain below year previous amounts for the last-half of the year, (Table 4).

Weights had been down somewhat starting last summer as corn prices escalated and hog prices dropped. Producers got current very quickly by marketing lightweight animals. Weights generally continued lower through the rest of the year. Weights are expected to begin to increase as hog prices increase in 2003. In the early portion of the year, weights may only be up modestly, but by the end of the year are expected to be a full 1% greater. On average for 2003, carcass weights are expected to increase to 197.9 pounds, a .8% increase compared to 2002, (Table 4).

Another “ball and chain” dragging hog prices in 2002 was the amount of pork in cold storage. At the end of July, pork in cold storage stood nearly 40% greater than the previous year. However, by the end of November, that was reduced to a more comfortable 8% greater. Also frozen pork bellies were 22% greater at the end of July, but were only 50% of last-year’s inventory by the end of November. These numbers indicate that the concern of excess pork in cold storage is largely behind us and thus are another leading indicator of better hog prices to come.

Anticipated pork production by quarter is shown below and in Table 4. The large reduction of nearly 4% in 2nd quarter supplies is due to an unexplained large number of hogs that reached slaughter in the 2nd quarter of 2002. At that time, the appropriate pig crop was up only 1.5%, but slaughter was up 4.4%. For the last-half of 2003, slaughter is expected to be down 2.8% with pork production down 1.5%.

Prices are expected to recover steadily through the first-half of 2003, perhaps reaching the mid-$40s by June. The first quarter estimated price of $38.78 looks a bit difficult to reach given prices in the very low $30s at the start of the year. The futures market will expect to see cash hog prices rising to justify the premiums that traders have built into the market. In general, my price estimates do not justify the lofty prices that the futures market was trading going into the report.

For the year, I anticipate an average price near $40 for 51% to 52% lean hogs on a live basis. The strongest prices can be anticipated in late May, June, and July with weakness in the final quarter of the year.

PRODUCTION			Percent
		Production	Change vs.
Year	Quarter	Million#s	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	4,800	0.4%
	II	4,613	-3.9%
	III	4,765	-1.4%
	IV	5,203	-1.6%
		19,381	-1.6%

PRICES		Liveweight	Percent
		Price	Change vs.
Year	Quarter	$/cwt.	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	$38.78	-1.6%
	II	$43.53	24.4%
	III	$39.29	16.0%
	IV	$36.65	16.8%
		$39.56	13.3%

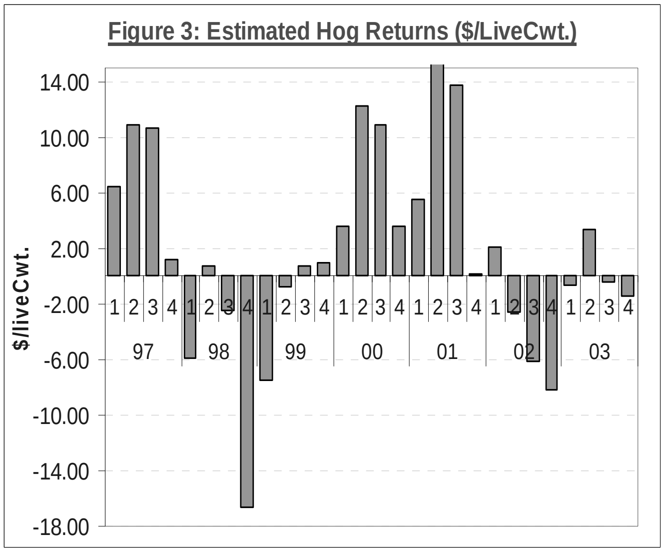
Implications

The time has arrived for the cash hog market to begin its movement to higher ground. While prices should improve in the next two months, the strongest surge in prices may not come until the March through May period. Pork cold storage stocks have been reduced, and demand should improve through the year with growing U.S. and world incomes, smaller pork supplies, and reductions in beef supplies.

Feed prices have not been as high as anticipated in the late summer time. March 2003 corn futures have fallen around 60 cents per bushel from the August drought concerns, and March soybean meal futures are about $15 lower than during that period. While the last-half of 2002 was still a major loss period, most feared it was going to be worse. Given the tight carryover situation for both corn and soybeans, some ownership protection, especially on corn seems worthy of consideration at this time. Soybean meal prices will be sensitive to weather in South America through the winter, and corn prices will be sensitive to the pace of exports and weather in the U.S. in the late winter through next summer. Expect corn basis levels to remain about 10 cents stronger than normal through next summer.

Thinking about new crop prices, I am not looking for a return to the depressed corn prices of the 1998 to 2001 crops. At this point, I would anticipate a 2003 crop to have an average U.S. market price of about $2.25 per bushel rather than the sub $2.00 of the abundant crop years. This means that hog production costs, while dropping, will not achieve the low levels of 1998 to 2001.

A return to a profitable industry is expected by late winter or early spring of 2003. The most recent loss period stretched from the 2nd quarter of 2002 through the 1st quarter of 2003. Losses during this time period were reasonably consistent with the loss periods on previous cycles, but considerably less than experienced during the 1998/99 losses, **(Figure 3)**.



While current price estimates would still result in modest estimated losses in the last-half of 2003, it is often the case that once the breeding herd begins to drop, there are greater declines than initially registered by USDA. If this is the case, prices in the last-half of 2003 could be higher, and profits better than I have indicated.

Given the loss period just experienced, when might we see the highest prices on the next cycle? Generally it takes about 4 to 6 quarters after the loss period to reduce farrowings and 6 to 8 quarters to increase prices. These cycle guidelines would provide the best prices on the cycle in late 2003 and the first-half of 2004. If so, once the industry turns back to profits in the spring of 2003, we can expect a favorable return period through the summer of 2004.

Historically I have argued that producers should be cautious about using futures to hedge when price prospects are improving as they are now. This is because the ultimate cash market prices (historically) have tended to be higher than anticipated by futures. Following this logic, hedging with options tends to be preferred. Of course, all of us wonder just how much faith to put in historical facts in the “new” hog industry, and thus each individual will have to evaluate the opportunities to “lock in” profitable prices using futures or options over the next 14 months.

Table 1. Hogs and Pigs in the United States, December 1, 2002

	2001	2002	2002 as % of 2001
	------1,000 head------		percent
Inventory			
All hogs and pigs	59,804	58,943	98.6
Kept for breeding	6,209	6,012	96.8
Kept for market	53,594	52,931	98.8
Market hogs by weight			
Under 60 pounds	19,908	19,461	97.8
60-119	12,924	12,919	100.0
120-179	10,744	10,736	99.9
180 and over	10,018	9,815	98.0
Sows farrowing			
June - Aug	2,878	2,833	98.4
Sep - Nov	2,889	2,817	97.5
Dec - Feb [I]	2,836	2,807	99.0
Mar - May [I]	2,943	2,854	97.0
Pigs saved per litter			
Mar - May	8.89	8.82	99.2
June - Aug	8.87	8.87	100.0
Sep - Nov	8.82	8.83	
Pig crop			
Mar - May	25,509	25,959	101.8
June - Aug	25,539	25,114	98.3
Sep - Nov	25,492	24,892	97.6

I Intentions

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

Years[c]	Number of Hogs 60 to 179 Pounds	Jan-March Commercial Slaughter	Ratio
	1,000 head		
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	24,574	103.3
2002	23,668	24,139	102.0
2003	23,655	24,349	102.9[b]

[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 1991 to 2003

Year	Sows Farrow	Pig Crop	Ratio	Year	Commercial Slaughter	Ratio [b]
	June-August				January-March	
1991	3,105	24,499	7.89	1992	23,802	97.4
1992	3,020	24,590	8.14	1993	23,057	93.8
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	25,571	96.0
1999	2,920	25,862	8.86	2000	25,019	96.7
2000	2,889	25,548	8.84	2001	24,574	96.2
2001	2,878	25,539	8.87	2002	24,139	94.5
2002[a]	2,833	25,114	8.87	2003	24,063	95.8
	September-November				April-June	
1991	2,969	23,427	7.89	1992	22,202	94.8
1992	2,992	24,086	8.05	1993	22,661	94.1
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	23,107	92.5
2000	2,838	25,112	8.85	2001	23,273	92.7
2001	2,889	25,492	8.82	2002	24,290	95.3
2002[a]	2,817	24,892	8.83	2003	23,273	93.5
	December-February				July-September	
91/92	2,892	23,258	8.04	1992	23,746	102.1
92/93	2,808	22,871	8.15	1993	22,777	99.6
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	23,631	98.6
01/02	2,836	24,794	8.74	2002	25,117	101.3
02/03	2,807	24,561	8.75	2003	24,413	99.4
	March-May				October-December	
1991	3,287	26,158	7.96	1991	24,367	93.2
1992	3,368	27,208	8.08	1992	25,138	92.4
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	26,732	101.8
2000	2,885	25,565	8.86	2000	25,714	100.6
2001	2,870	25,509	8.89	2001	26,465	103.7
2002	2,943	25,959	8.82	2002	26,801	103.2
2003	2,854	25,401	8.90	2003	26,042	102.5

[a]Estimated

[b]Last entry is the average of previous three years

Table 4. U.S. Commercial Slaughter, Carcass Weights, and Quarterly Pork Production 1990-2003

Year	Quarter	Commercial Slaughter (1,000 head)	Carcass Weight Per Hog	Pork Production (million #'s)	Percent Change Year-Ago
1990	I	21,879	178.3	3,902	+.4
	II	20,257	179.9	3,645	-7.2
	III	20,350	178.8	3,639	-4.0
	IV	22,628	181.4	4,105	-1.2
1991	I	21,508	181.4	3,902	0.0
	II	20,921	181.3	3,792	4.0
	III	21,371	178.8	3,822	5.0
	IV	24,365	182.0	4,434	8.0
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	24,574	195.5	4,805	-0.4
	II	23,273	195.3	4,546	1.5
	III	23,631	192.5	4,548	-1.3
	IV	26,465	198.0	5,239	4.6
2002	I	24,139	198.0	4,779	-0.5
	II	24,290	197.6	4,800	5.6
	III	25,117	192.4	4,832	6.2
	IV[p]	26,801	197.4	5,290	1.0
2003	I[ac]	24,206	198.3	4,800	0.4
	II[a]	23,273	198.2	4,613	-3.9
	III[a]	24,413	195.2	4,765	-1.4
	IV[a]	26,042	199.8	5,203	-1.6

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
1990	I	$49.45	$66.82	196.2
	II	$59.01	$79.74	208.4
	III	$57.67	$77.93	222.6
	IV	$51.67	$69.82	223.1
1991	I	$51.50	$69.59	215.2
	II	$53.34	$72.08	213.2
	III	$50.85	$68.72	214.6
	IV	$39.84	$53.84	204.6
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[p]	$31.39	$42.42	260.7
2003	I[a]	$38.78	$52.41	
	II[a]	$43.53	$58.82	
	III[a]	$39.29	$53.09	
	IV[a]	$36.65	$49.53	

a Predicted prices for 2003 (I) forward are made with two equations with the results averaged.

p Preliminary