

Wisconsin Agriculture and Dairy Outlook

By Bob Cropp

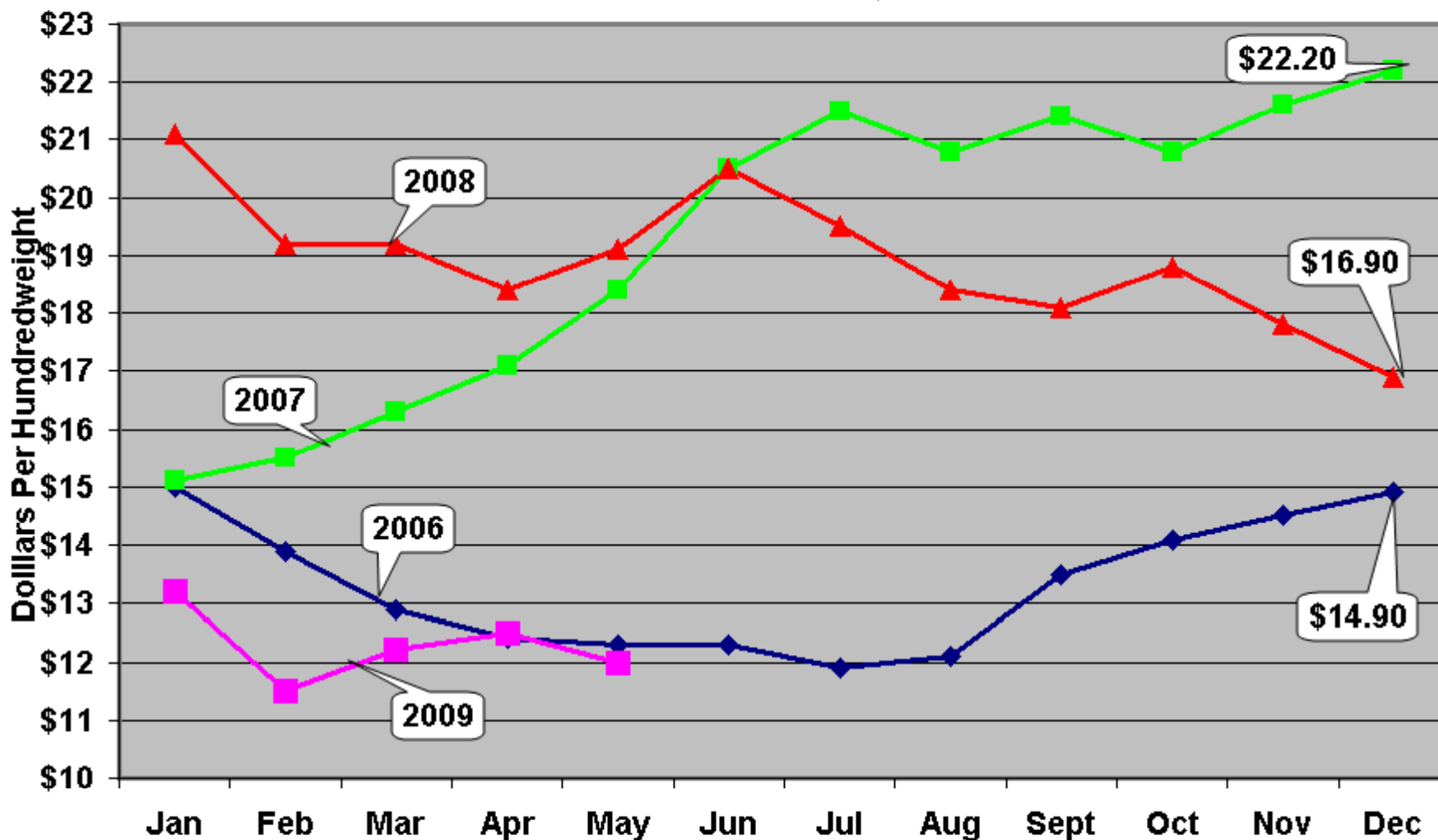
Professor Emeritus

Presented at Wisconsin Statewide Managers Association

Summer Meeting

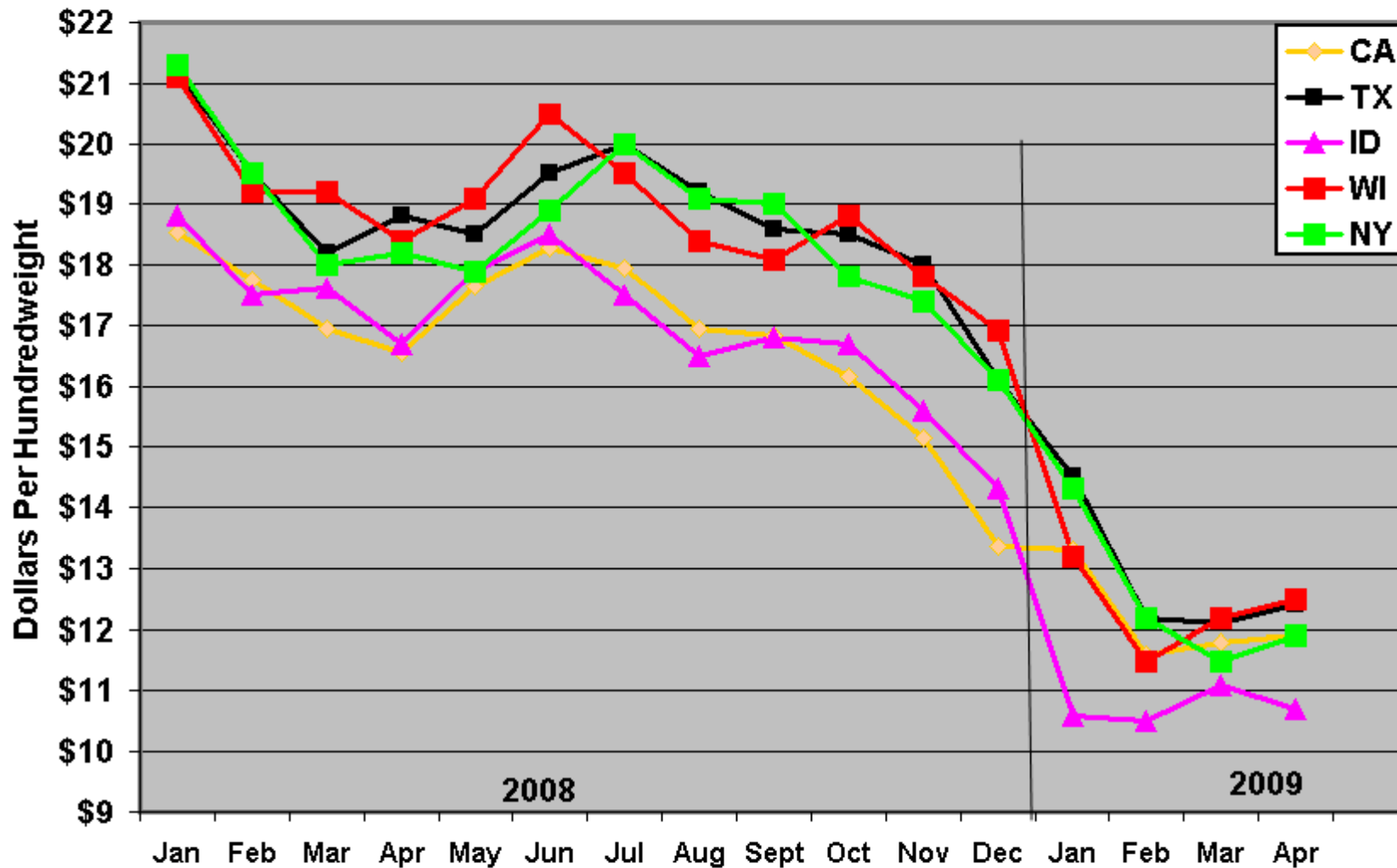
June 25, 2009

Wisconsin All Milk Price; 2006-2008

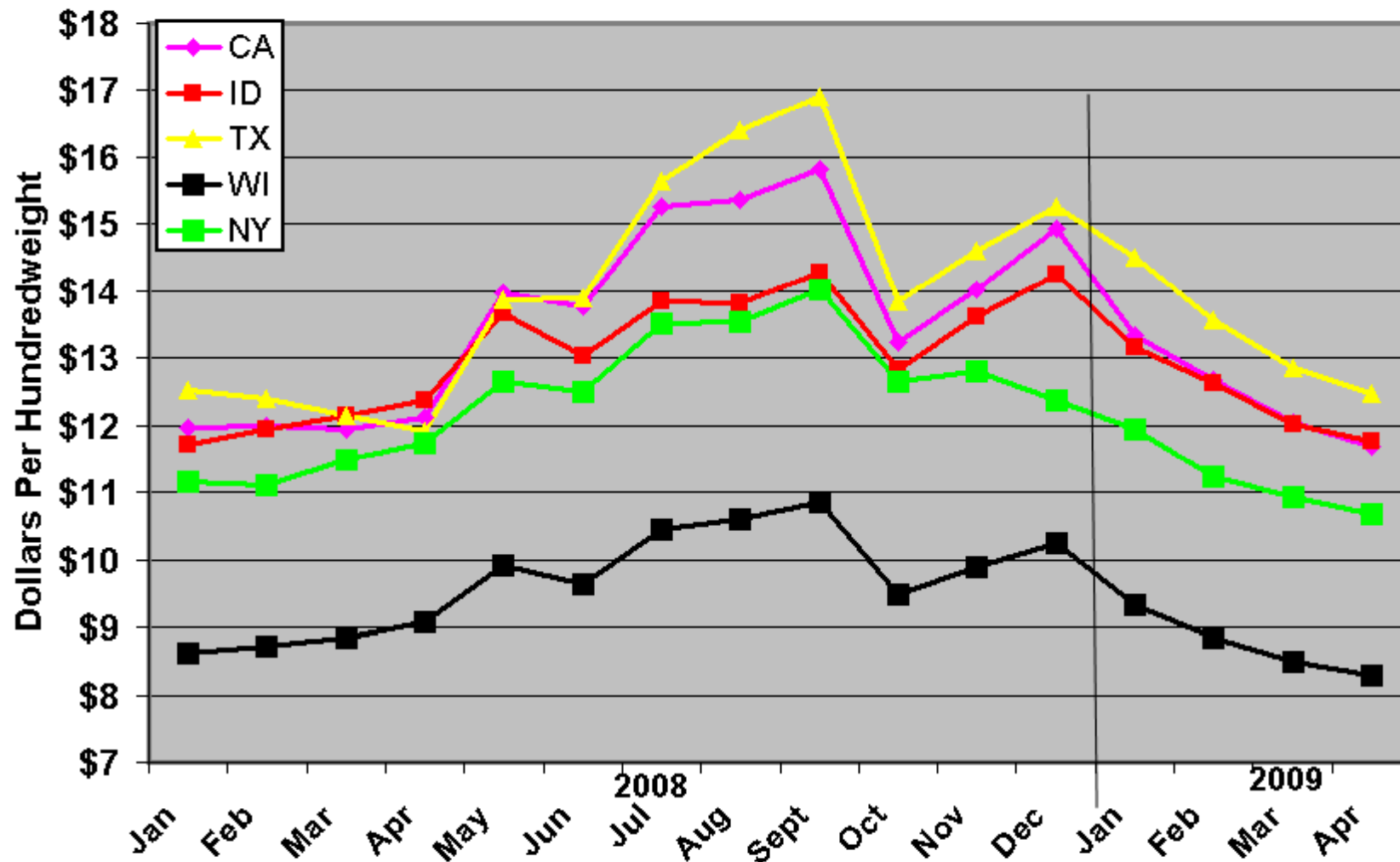


The 2007 average was a record \$19.27; 2008 average second highest at \$18.93

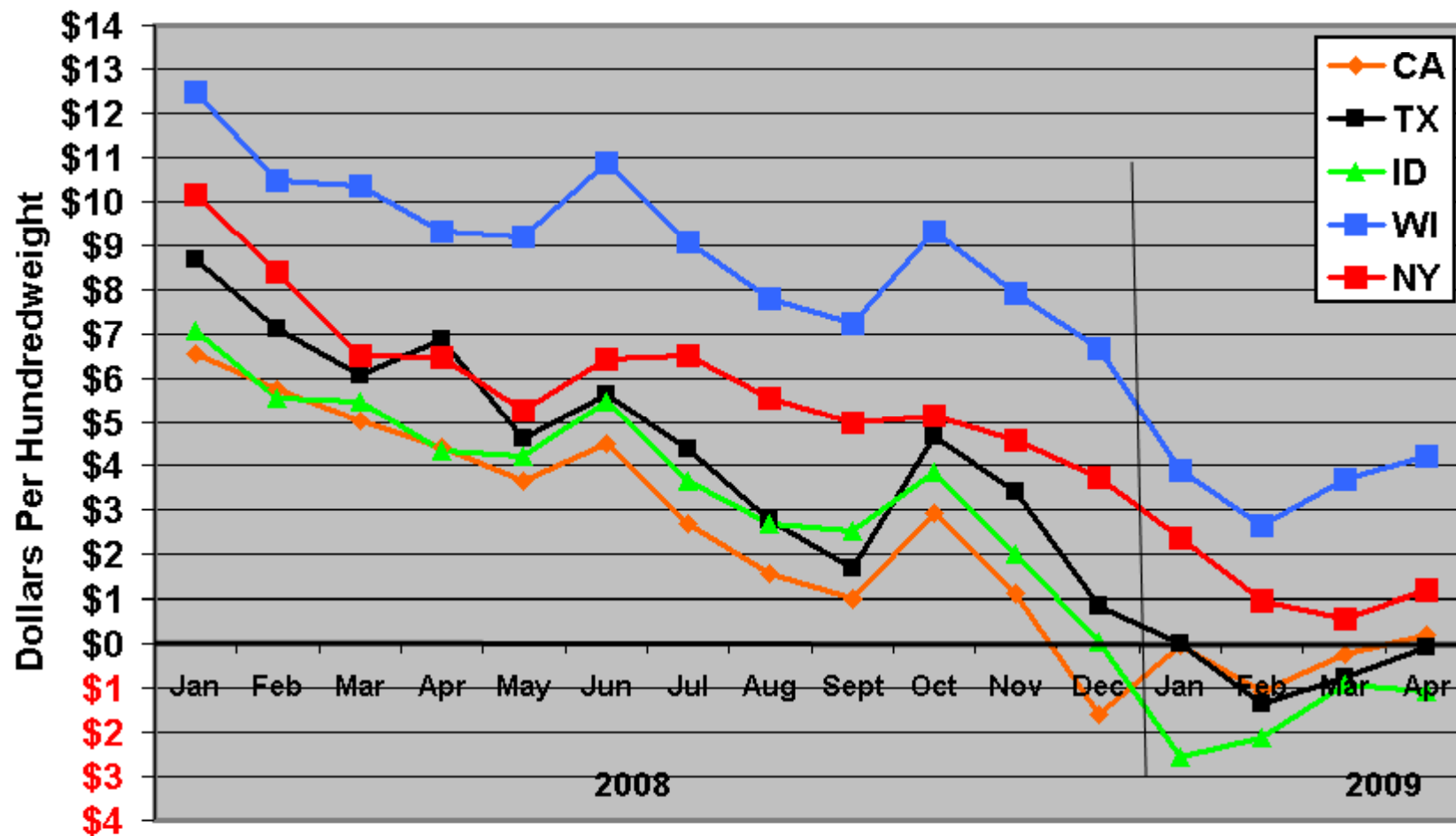
NASS All Milk Price Per Hundredweight



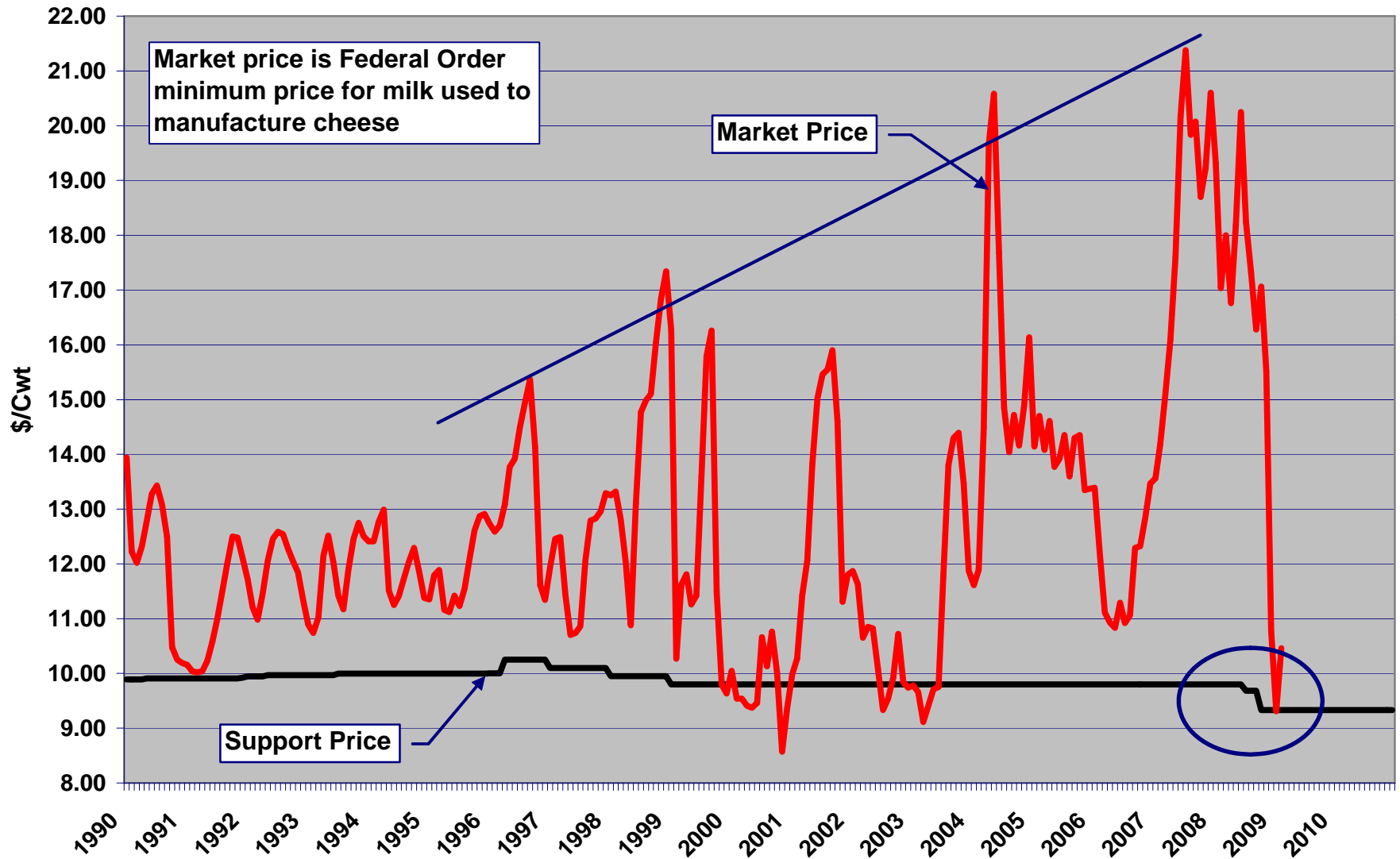
ERS Estimated Feed Costs Per Hundredweight of Milk



Returns Over Feed Costs: NASS All Milk Price Minus ERS Estimated Feed Costs



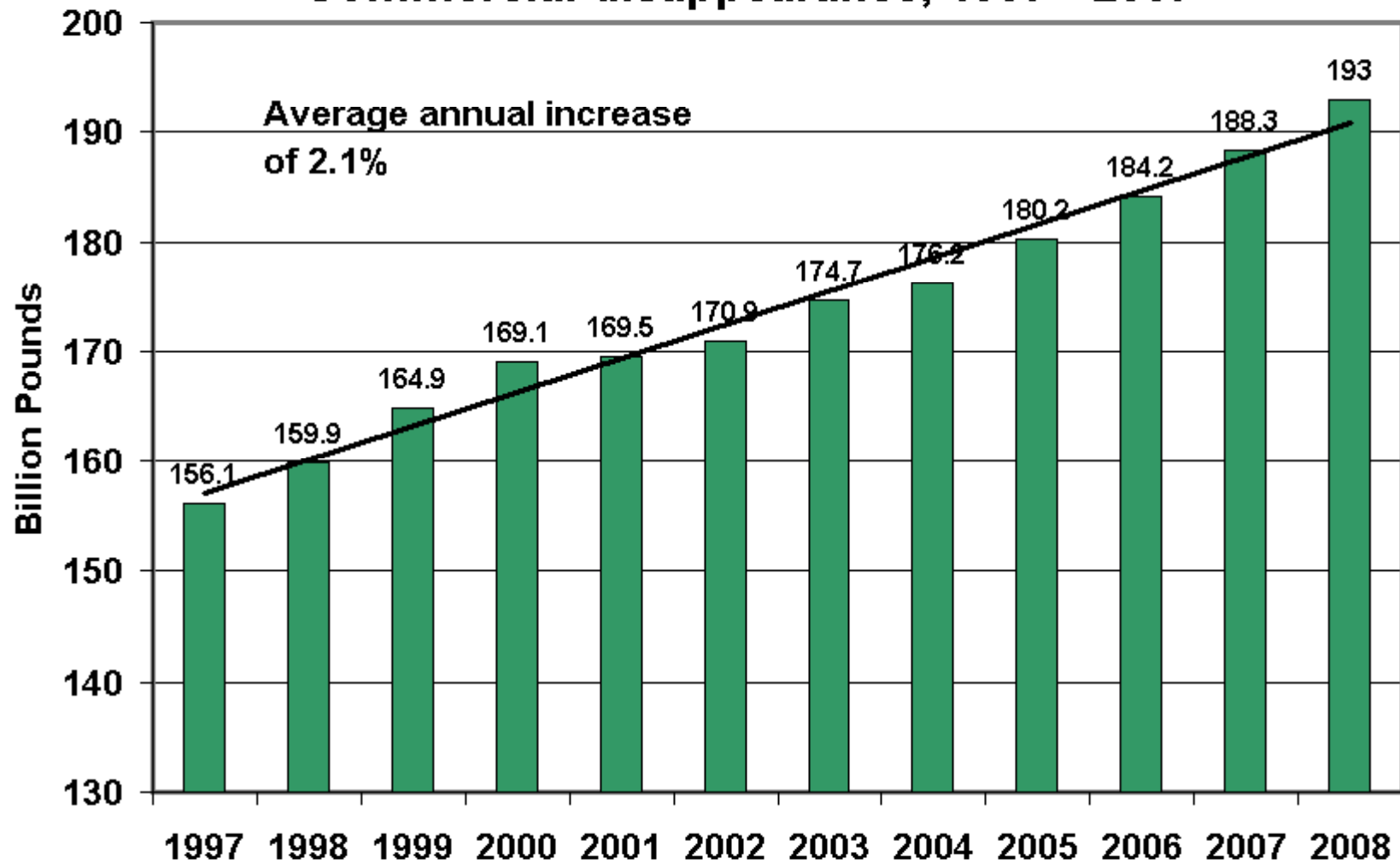
Market and Support Prices for Milk



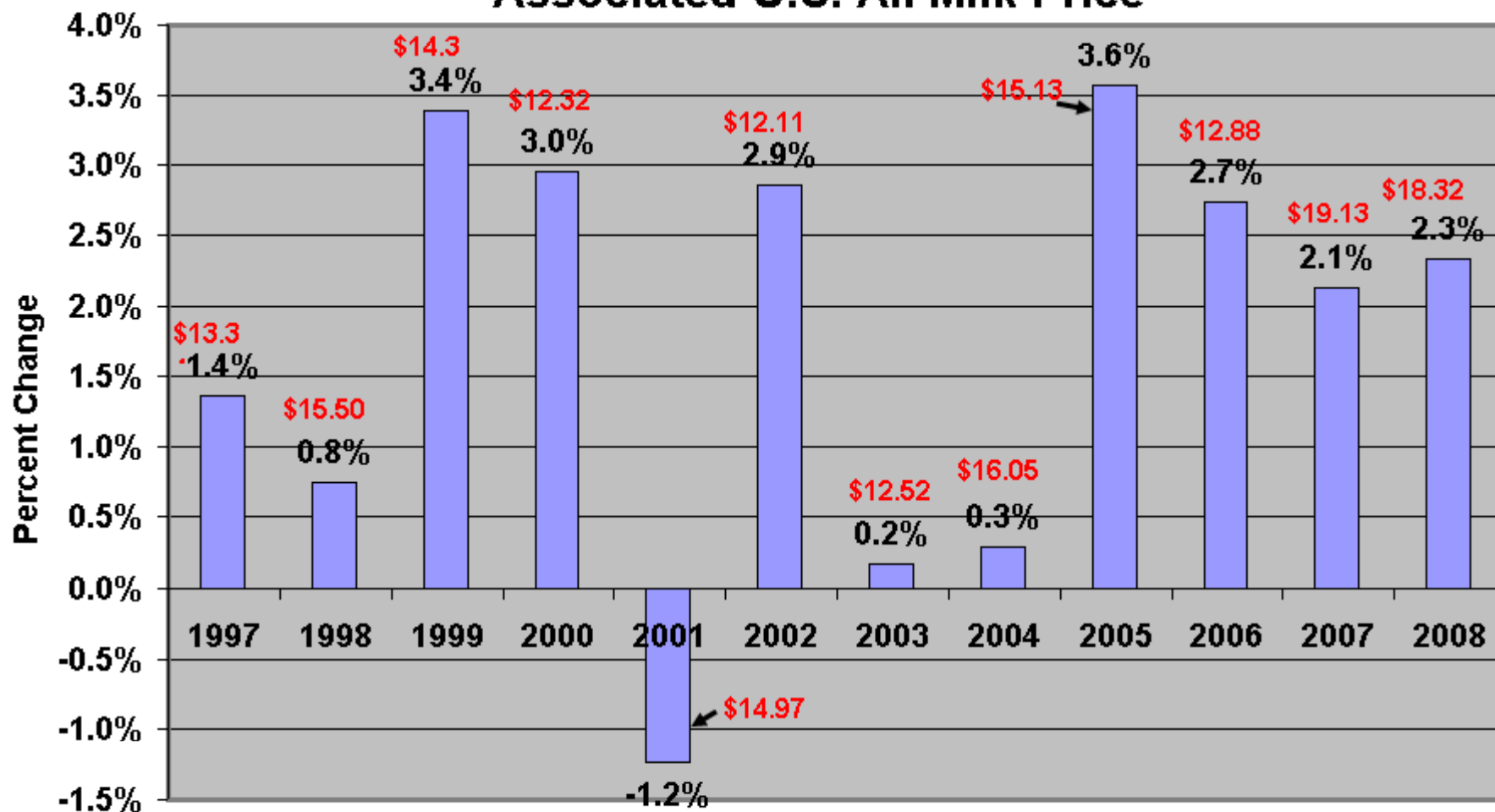
Since the early 1990s the major factor for lower milk prices was relatively more milk production.

- Whenever milk production increased by much more than 2% milk prices declined.
- Why, commercial disappearance (sales) increased annually about 2%
- But, the current severely depressed milk prices is different. It is due to lower commercial disappearance and not a lot more milk.

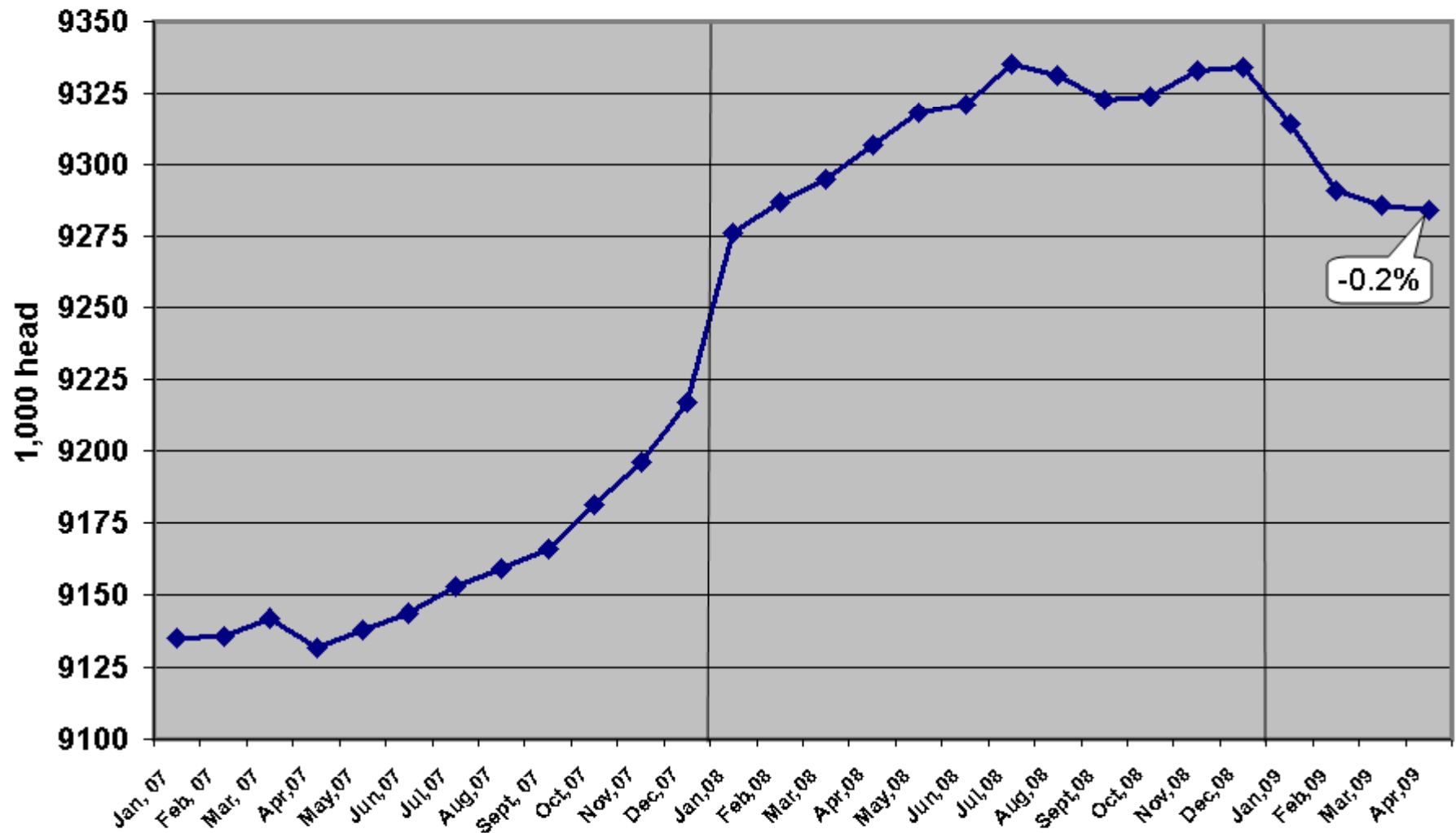
Commercial disappearance, 1997 - 2007



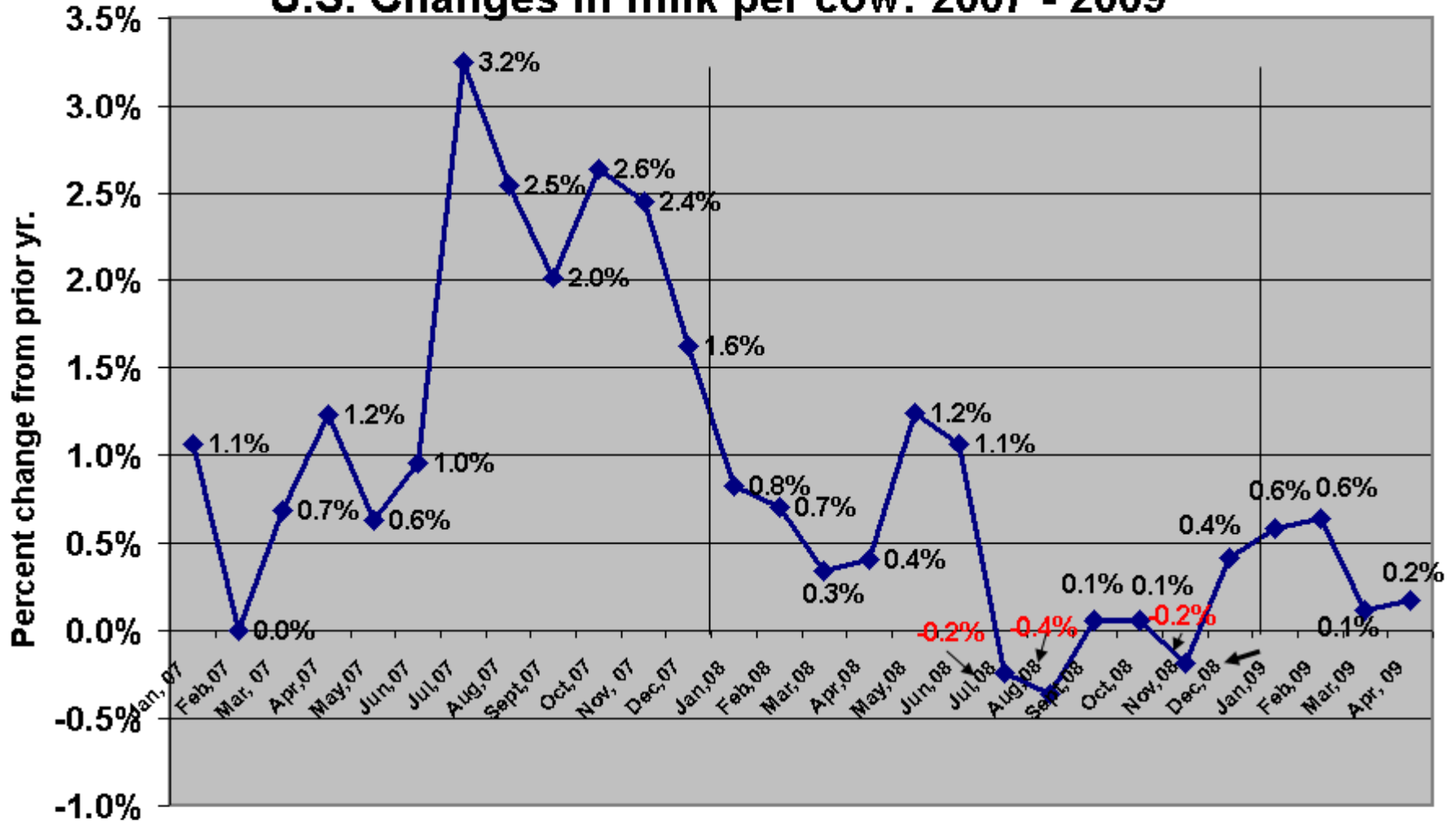
Percent Change in U.S. Milk Production and Associated U.S. All Milk Price



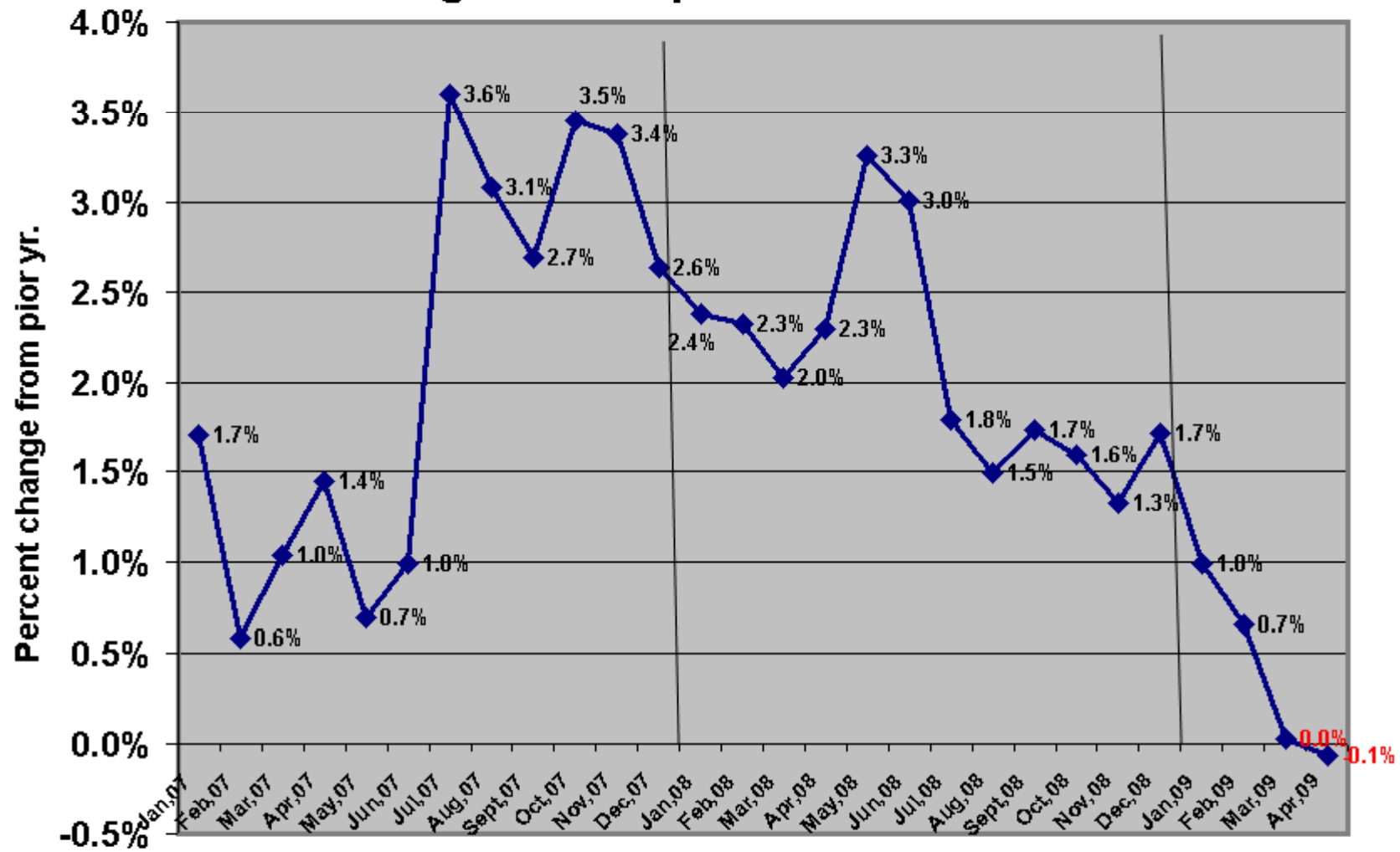
U.S. Milk Cows: 2007 - 2009



U.S. Changes in milk per cow: 2007 - 2009



U.S. Change in milk production: 2007 - 2009



April Milk Production: Key States

Percent Change from Year Ago

State	Milk cows	Milk per cow	Total milk
California	-1.3	-1.0	-2.3
Idaho	+1.3	-2.7	-1.5
Texas	+4.9	+2.3	+7.2
New York	-0.5	0.0	-0.5
Pennsylvania	0.0	-1.8	-1.9
Michigan	+2.6	+1.1	+3.8
Minnesota	+1.1	+1.9	+2.9
Wisconsin	+0.4	+1.2	+1.6

Domestic milk sales

- The economic down turn has taken a toll on milk and dairy product sales—especially cheese.
- Wholesale and retail prices are slowly coming down which should help sales. (April retail prices)

All dairy products	-5.1%
Whole milk	-16.6%
Cheese	-1.2%
Butter	-10.8%

Dairy product sales: Percent change in 2008 and Jan. – Mar. 2009

Dairy product	Jan. – Dec. 2008	Jan. – Mar. 2009
Butter	+12.6%	-6.6%
American cheese	+2.6%	+3.7%
Other cheese	-2.0%	-1.7%
Nonfat dry milk	+12.3%	-11.1%
Fluid milk	-0.2%	+1.8%
All products	+2.3%	-2.5%

Sales of Fluid Milk Products Jan. – Mar. 2009 vs. 2008

Product	March 2009 vs. March 2008	Year to date (Jan. – Mar.)
Whole milk	+0.1%	-1.8%
Organic whole milk	+2.9%	-0.6%
2% milk	+2.4%	+1.5%
1% milk	+4.6%	+2.5%
Skim milk	+0.3%	-0.7%
Organic low fat milk	+2.5%	-5.9%
Total fluid	+2.6%	+1.6%

In 2008, organic whole milk +23%, organic lowfat milk +19.7%

Organic milk production in Wisconsin
USDA, ERS Estimates
March 2009

Cost of production = \$27 to \$29/Cwt.

Average milk price = \$24.63/Cwt.

U.S. Dairy Exports: Pounds, percent of production and percent change from 2007

Product	Million Lbs. 2008	Change from 2007	Percent of production
NDM/SMP	863	+52%	46%
Cheese	290	+32%	3%
Butterfat	197	+125%	12%
Whey protein	737	-20%	28%
Lactose	409	+2%	55%

Percent of US Milk Production Exported *(Total Solids Basis)*

1997 = 4.5%

2005 = 8.3%

2006 = 9.3%

2007 = 9.5%

2008 = 10.8%

Dairy Exports 1st Quarter of 2009

Product	Tons	Percent change from 2008	Percent of production
NFDM/SMP	50,294	-52%	23%
Cheese	24,621	-26%	2.2%
Butter	5,162	-78%	2.4%
Whey proteins	82,127	+3%	48%
Lactose	45,265	-3%	58%

1st quarter exports totaled \$502.4 million, down 51%

Why the slow down in dairy exports?

1. Some strengthening of the U.S. dollar
2. Increase supply on world market by Australia, New Zealand, Argentina, Brazil and EU
3. EU re-instated export subsidies
4. Weakening of world economy
5. Melamine issue in China
6. Credit issues
7. World prices too low for commercial exports

World and U.S. product prices

Dollars Per Pound

Product	<u>World Price*</u>		<u>U.S. Price</u>
	<u>2008 High</u>	<u>May 30, 2009</u>	<u>May 30, 2009</u>
Butter	\$2.04 (July)	\$1.36	\$1.265
Cheddar cheese	\$2.49 (Jan.)	\$1.17	\$1.1500
Nonfat dry milk	\$1.76 (Feb.)	\$1.04	\$0.85 - \$0.90
Dry whey	\$0.45 (May)	\$0.26	\$0.25 - \$0.27

- EU price for butter, nonfat dry milk and dry whey; Oceania price for cheese
- Source: USDA-FAS

Estimated dairy Exports for 2009

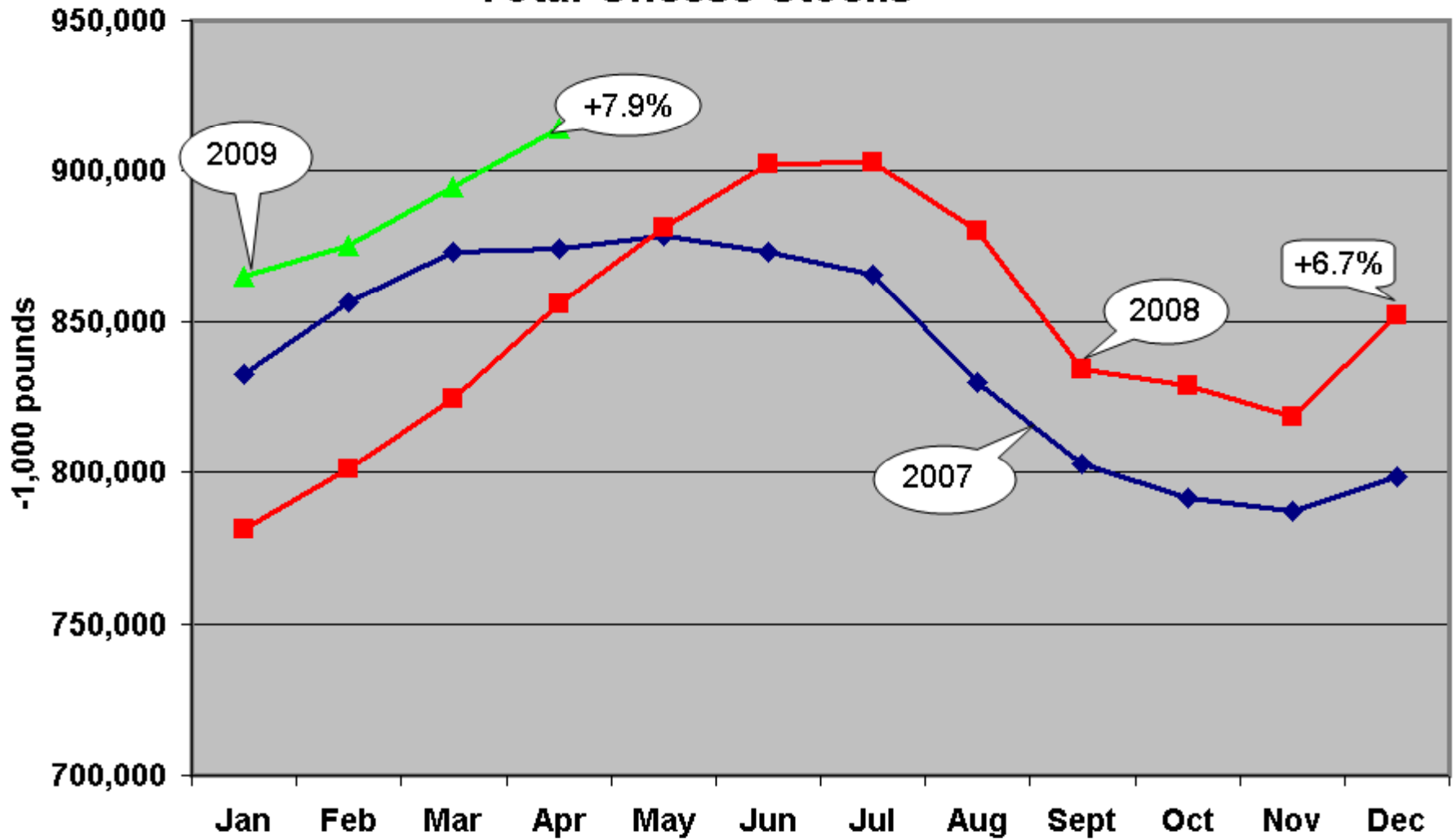
- U.S. Dairy Export Council—down 27% to 40%
- USDA—down 58% on a fat basis and 42% on a skim milk basis
 - *This is equivalent to putting 6 to 8 billion additional pounds of milk that needs to clear the domestic market, an increase of 3% to 4%*

April 2009 Dairy Product Production

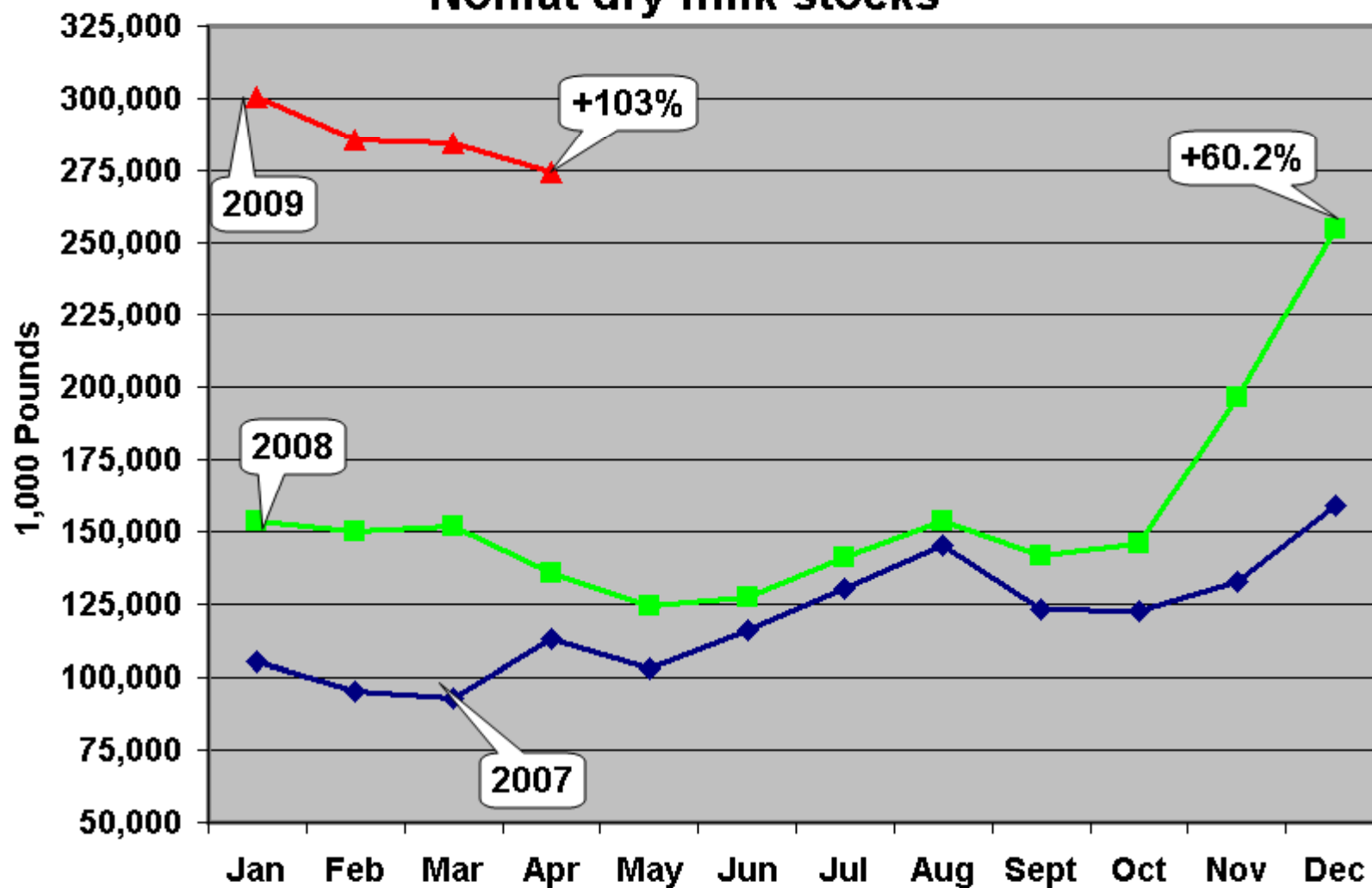
Percent Change from 2008

Butter	-3.9
American cheese	+3.2
Cheddar	-0.6
Mozzarella	-1.3
Total Italian	+0.3
Nonfat dry milk	+3.1
Skim milk powder	-31.6
Dry whey	-0.6
WPC	-12.1

Total Cheese Stocks



Nonfat dry milk stocks



What is the outlook for milk prices the remainder of 2009 and for 2010?

- There is a **100% probability** milk prices will improve as the year progresses and further price improvement in 2010 as:
 - *Dairy producers adjust to low milk prices, decreasing cows and total milk production.*
 - *Domestic demand slowly grows and dairy exports improve slowly, especially in 2010.*
- But there are major disagreements as to how much prices will improve.
- History tells us that dairy product prices and farm level milk prices can change a lot with relatively small changes in either and/or both milk production and sales

Milk cow numbers:

- Jan. 1st 9.33 million head, +0.5%
- Low milk prices and relatively high feed prices will encourage dairy cow slaughter and dairy exiting

January – May 9th cow slaughter up 12.1%

- *7th round of CWT, 102,898 cows late May to end of July*
- *8th round of CWT possible*
- *Good supply of dairy replacements; Jan 1st 4.41 million head; 291 million to calve next 12 months; 47.3 per 100 COWS*
- ***My estimate: Average number of cows in 2009 = 9.218 million head, down 1.2%***
- USDA estimate: 9.18 million head; down 1.6%

Milk per cow:

- Relatively high feed costs, low milk prices and poor returns over feed costs will dampen increases in milk per cow.
- Further reduced use of rBST
- Older lower producing cows culled and replaced with higher producing replacements
- **My estimate: +0.6% increase to 20,518 pounds**
- USDA estimate: 20,396 pounds; up 0.25%

Total milk production:

- *My estimate: 189.1 billion pounds*
- *-0.5% from 2008*
- USDA estimate is 187.7 billion pounds, down 1.2%

But, prices will continue to receive downward pressure from domestic sales and exports.

Domestic sales:

- Economy will remain sluggish
- Restaurant sales sluggish—**negative** for butter and cheese
- More home meals could help beverage milk sales
- Lower wholesale and retail prices a **positive**
- Credit crunch—carry less inventory

Dairy exports:

- Estimated to decrease as much as 25% to 35% from 2008
- Weak global economy
- Increases world supply from Australia, New Zealand, Argentina, Brazil, EU—EU exports subsidies reinstated
- Impact of China's melamine crisis
- Stronger dollar
- NMPF CWT export assistance will be active.
- Credit crunch to finance imports

Farm milk prices are driven by what happens to dairy product prices: cheddar cheese, butter, dry whey and nonfat dry milk.

- In Wisconsin about 90% of the milk is used to make cheese; thus the **Class III price** is the primary driver of Wisconsin farm milk prices.
- The Class III price is determined by a **Product Price Formula** that uses the prices of 40# cheddar blocks and 500# cheddar barrels, dry whey and butter.
- For a 10 cent per pound change in the product price the Class III price changes by:

Cheese = \$0.97 per hundredweight of milk

Dry whey = \$0.58 per hundredweight of milk

Butter = \$0.05 per hundredweight of milk

My estimated Dairy Product prices for 2009

Quarter	Cheese \$ per Lb.	Butter \$ per Lb.	Dry whey \$ per Lb.	Nonfat dry milk \$ per Lb.
Jan. – Mar.	1.833 to 1.2455	1.1096 to 1.1770	0.1578 to 0.1705	0.8313 to 0.8504
Apr. – Jun.	1.2045 to 1.25	1.2042 to 1.28	0.2053 to 0.27	0.86 to 0.88
Jul. – Sept.	1.35 to 1.50	1.32 to 1.35	0.29 to 0.30	0.88 to 0.95
Oct. – Dec.	1.55 to 1.65	1.37 to 1.41	0.31 to 0.31	0.95 to 1.00

Note: Jan. through Apr. prices are actual.

**Based on estimated dairy product prices 2009
milk prices per hundredweight would be:**

Quarter	Class III	Class IV	U.S. All milk	WI. All Milk
Jan. – Mar.	9.31 to 10.78	9.45 to 9.64	13.30 to 11.60	13.20 to 11.50
Apr. – Jun.	9.84 to 11.00	9.82 to 10.75	11.95 to 12.30	12.50 to 12.75
Jul. – Sept.	11.80 to 13.65	11.00 to 11.75	13.10 to 14.95	13.55 to 15.40
Oct. – Dec.	14.20 to 15.15	11.80 to 12.40	15.50 to 16.45	15.95 to 16.90
Aver. 2009	12.10	10.85	13.65	14.00
Aver. 2008	17.44	14.65	18.29	18.93

Note: Jan. to May prices are actual.

My estimates for 2009 vs. USDA's

Average per hundredweight for the year

Price	Cropp's	USDA's
Class III	\$12.10	\$10.55 - \$11.05
Class IV	\$10.85	\$9.95 - \$10.55
U.S. All Milk	\$13.65	\$11.85 - \$12.35

Could actual dairy product prices and milk prices turn out higher or lower?

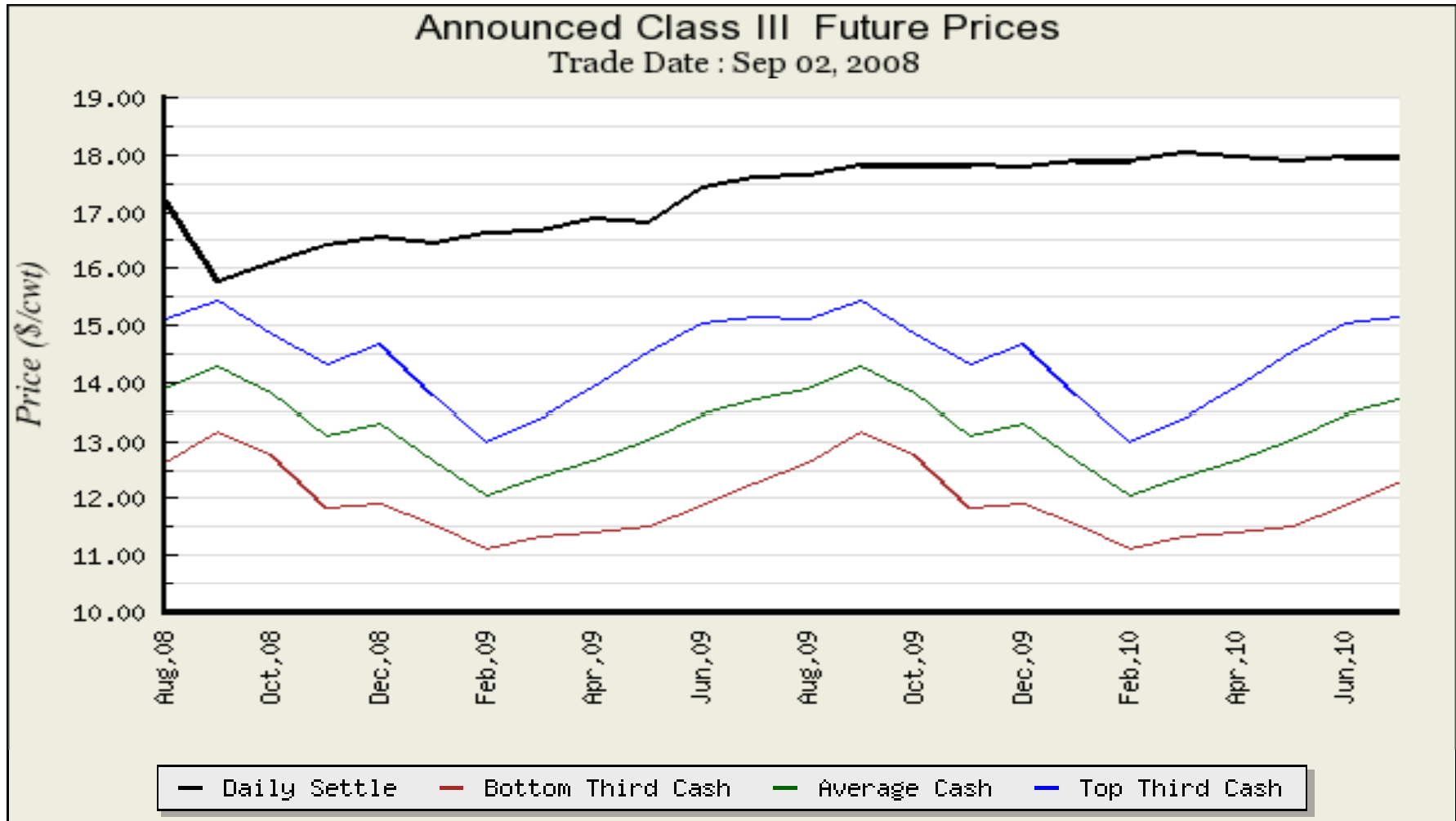
Absolutely—we know that prices change with relatively small changes in either and/or both milk production and sales.

Critical factors will be milk per cow (weather can play a roll here), number of cows, domestic sales and exports.

It seems each year we have **surprises**—in 2007& 2008 higher than expected prices; in 2009 thus far lower than expected prices.

As a result, **managing price risk** is an absolute.

There was an opportunity for dairy producers to avoid these low milk prices into 2010.



Looking ahead to 2010

- Milk prices will continue to improve.
- The size of the nation's dairy herd will average lower than 2009 with most of the reduction in number of cows the first half of the year—perhaps about 1.5% lower.
 - *USDA estimates 2.5% lower, about 230,000 cows lower*
- Milk per cow could increase around 1.5%
 - *USDA estimates 2.0%*
- Total milk production would be about the same as 2009's 189.1 billion pounds
 - *USDA has milk production declining another 0.9 billion pounds to just 186.8 billion pounds; this is 3.1 billion less pounds than what was produced in 2008.*

Class III, Class IV & U.S. All Milk Prices: 2010
Dollars Per Hundredweight

Quarter	Class III Price	Class IV Price	U.S. Average All Milk Price
Jan. – Mar.	\$14.20	\$11.75	\$15.40
Apr. – Jun.	\$14.85	\$12.40	\$16.00
Jul. – Sept.	\$16.35	\$13.25	\$17.55
Oct. – Dec.	\$16.75	\$13.20	\$17.95
Yearly Average	\$15.60	\$12.65	\$16.75

USDA's estimates are: Class III \$13.80 to \$14.80; Class IV \$12.30 to \$13.40; All Milk \$14.70 to \$15.70

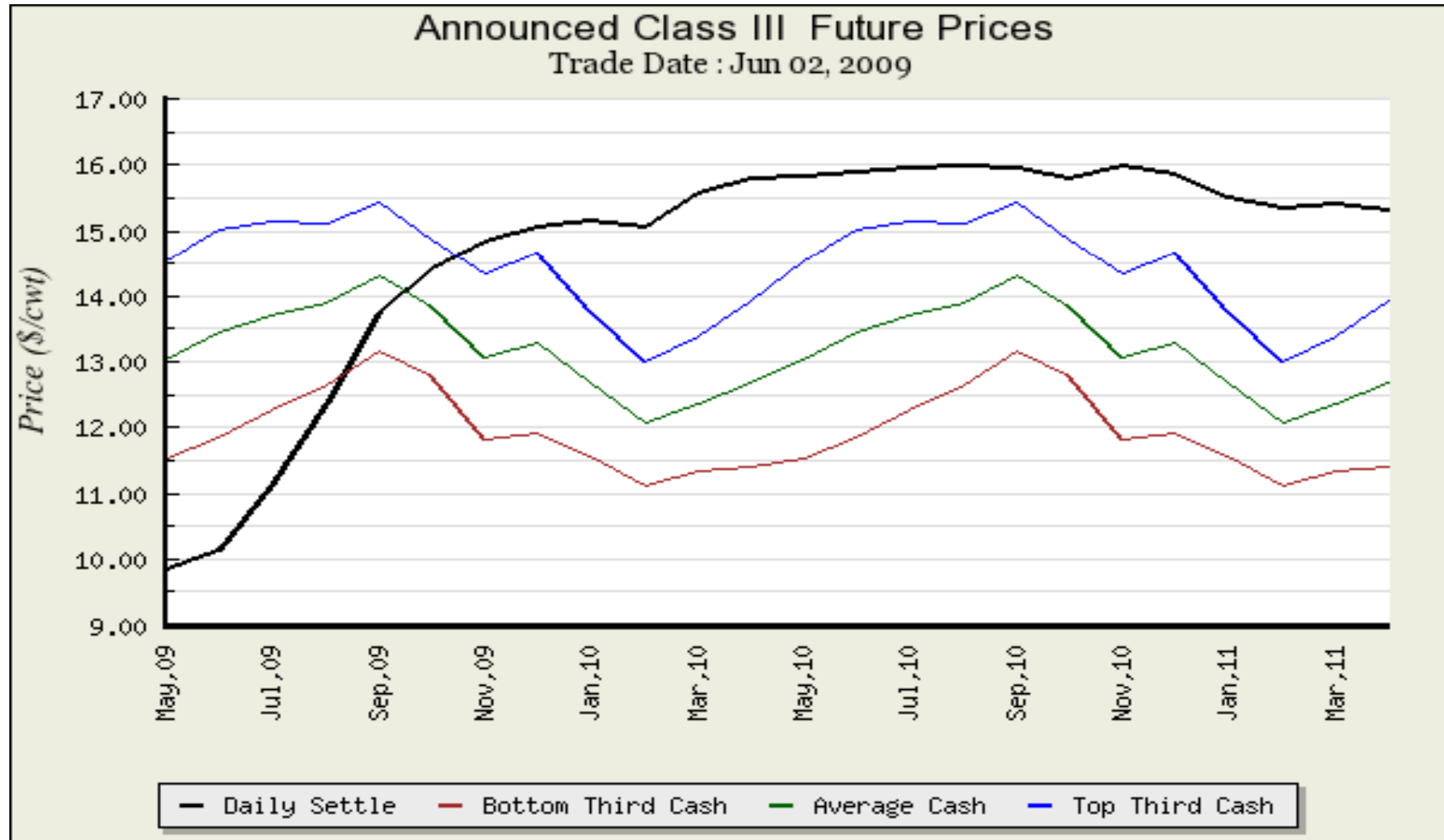
With the difference in Cropp's 2010 milk production forecast from that of USDA's, why does USDA still predict lower milk prices than Cropp?

- USDA has no growth in commercial disappearance in 2010 and only a 2.7% increase in dairy exports on a fat basis with no increase on a skim milk basis.
- I am more optimistic on the commercial disappearance as the economy slowly improves and wholesale and retail prices average lower. While not a major improvement I am a little more optimistic on exports—especially milk proteins.

But, history tells us that final milk prices may end up quite different than either Cropp's or USDA's current estimates. Prices are very sensitive to small changes.

- The probability that 2010 prices will end up **lower** is slight, especially USDA's forecasted prices.
- The probability is higher that 2010 prices could end up **higher** than these current forecasts, especially USDA's forecasted prices.
- Could we see \$20 milk in 2010? Possible, but the odds are against it. A greater possibility in 2011.

Are there risk management strategies to protect favorable milk prices for 2010? 2011?



Answer: Much improved over 2009 but yet not great for many producers.