

Dairy Situation and Prospects for Upper Midwest Dairy Industry

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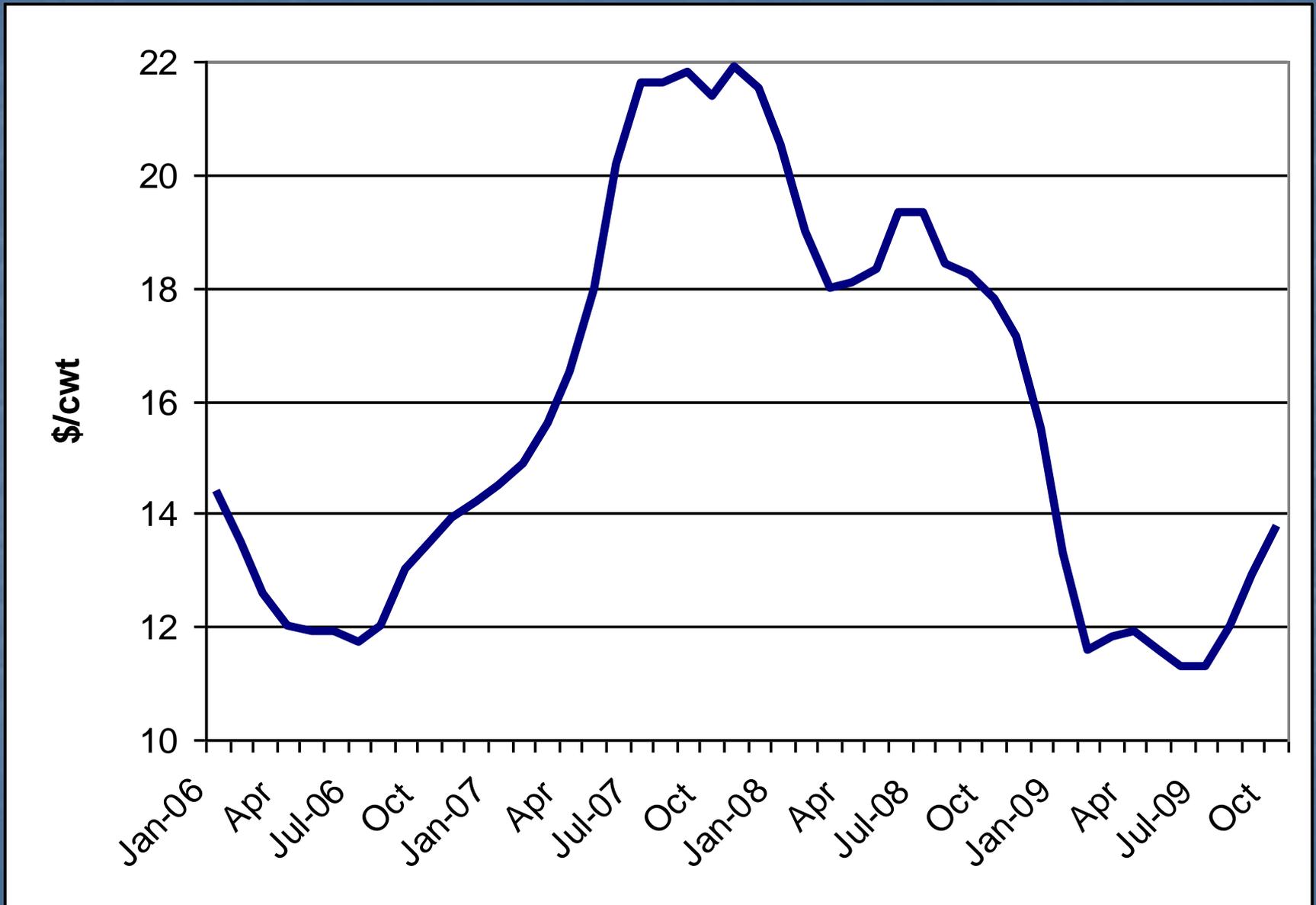
Outline

- Review current situation: causes, consequences and reactions
- COP, Regionalism and structure
- SWOT analysis of Upper Midwest Dairy Industry

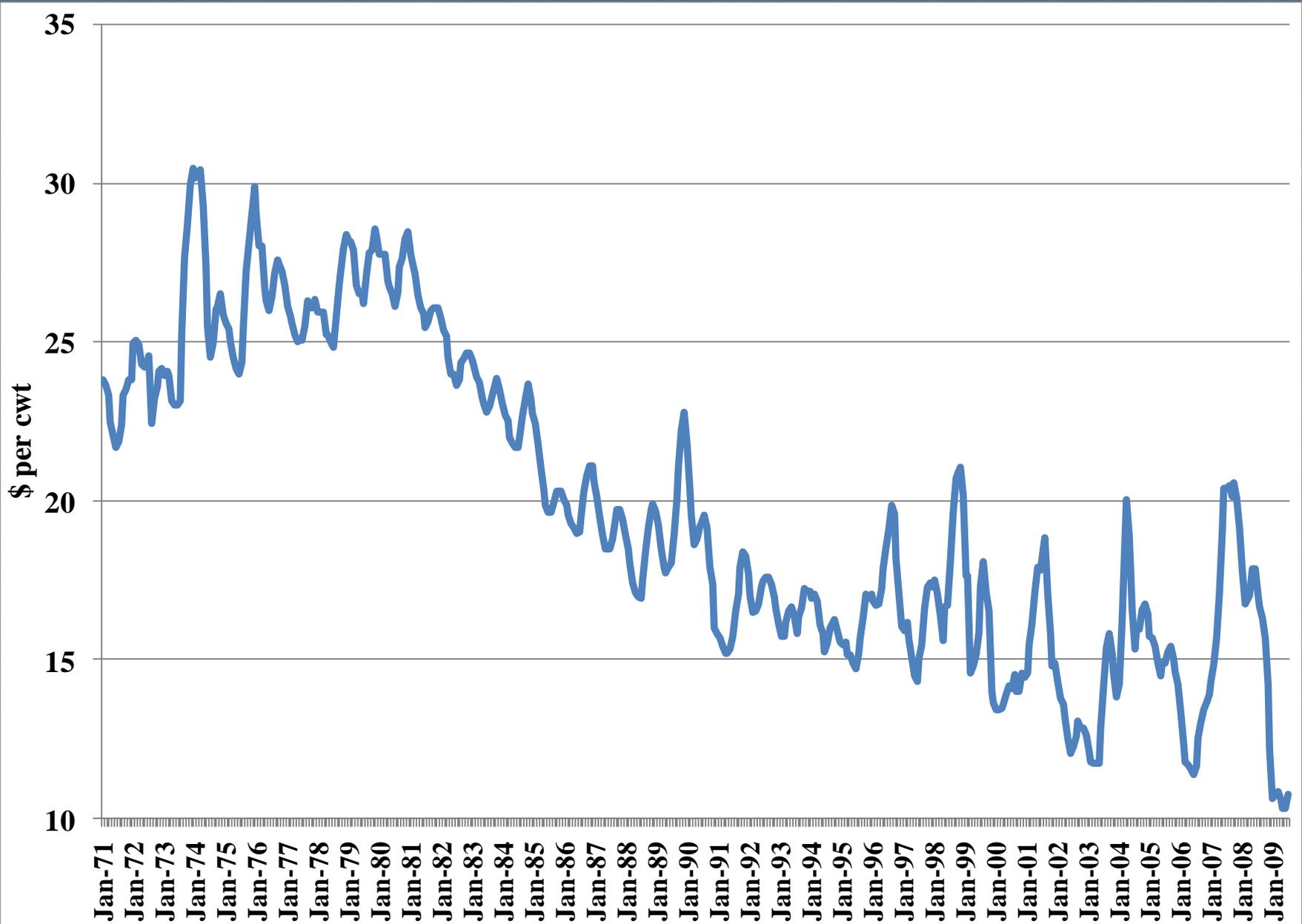
Sources

- USDA-NASS
- Ed Jesse, University of Wisconsin
- future.aae.wisc.edu
- Wisconsin Milk Marketing Board
- USDA-ERS cost of production
- Michigan dairy farm business analysis summary

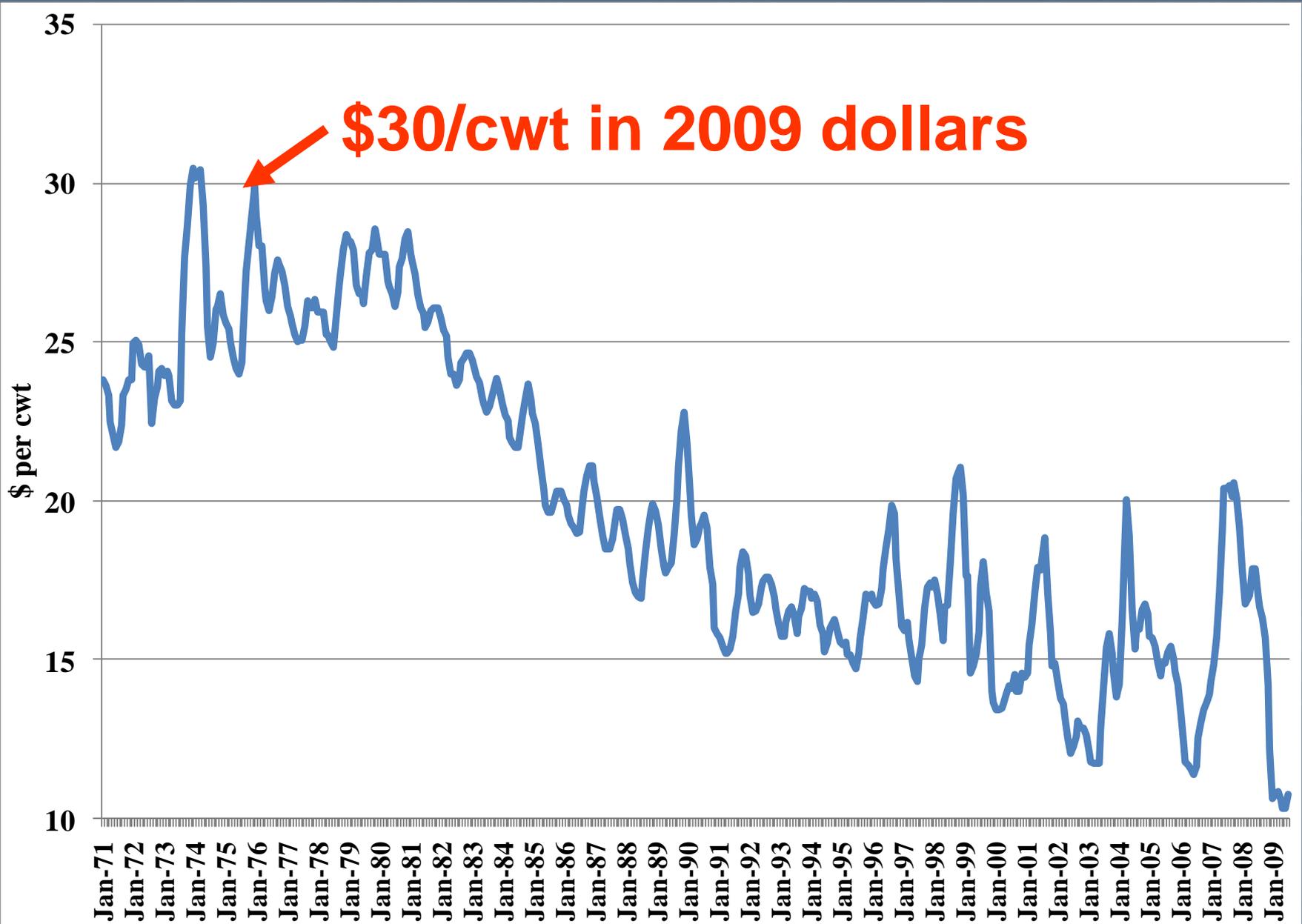
All milk: nominal monthly price, January 2006-October 2009



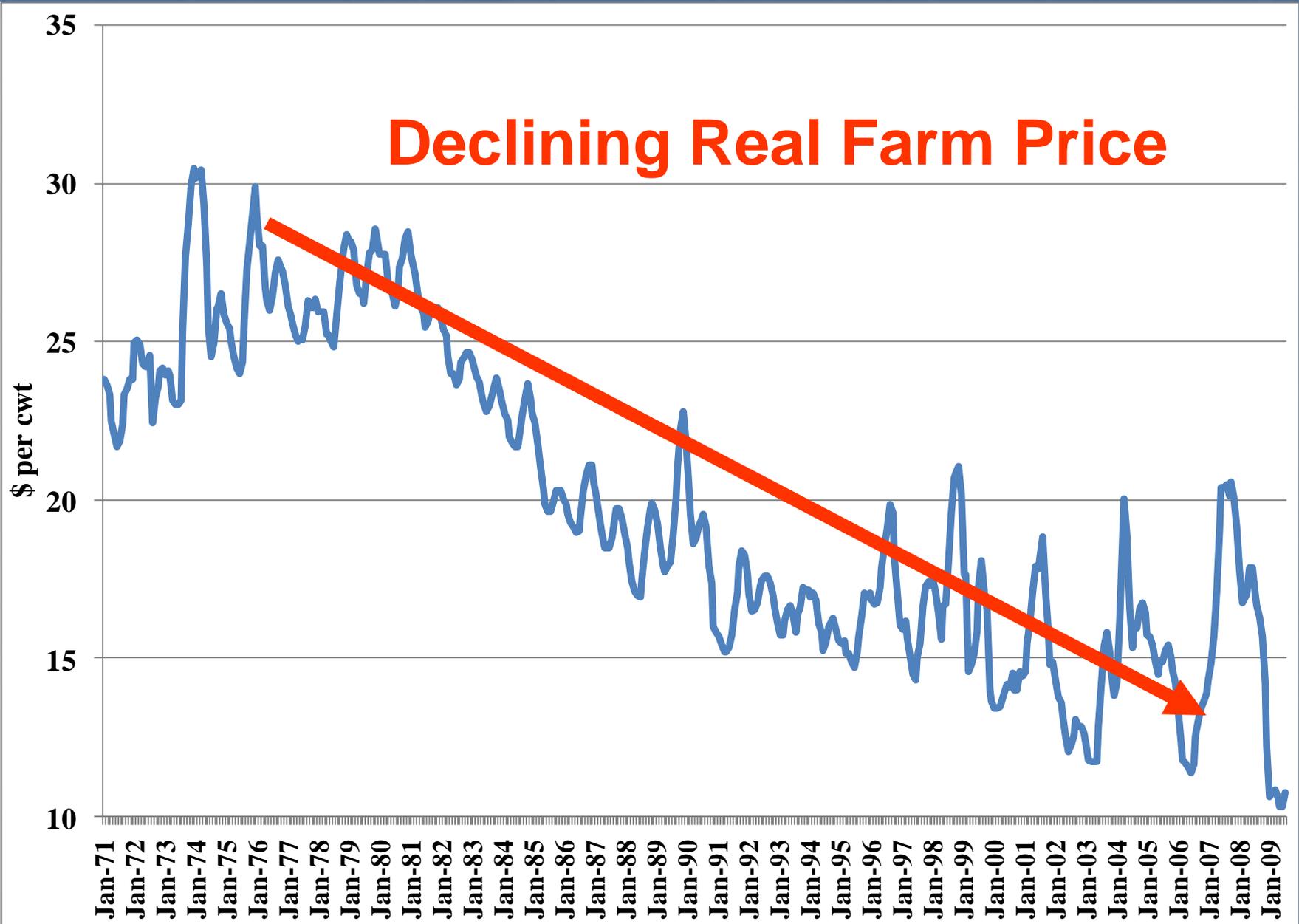
All milk: monthly real prices, Jan 1971 - Aug 2009



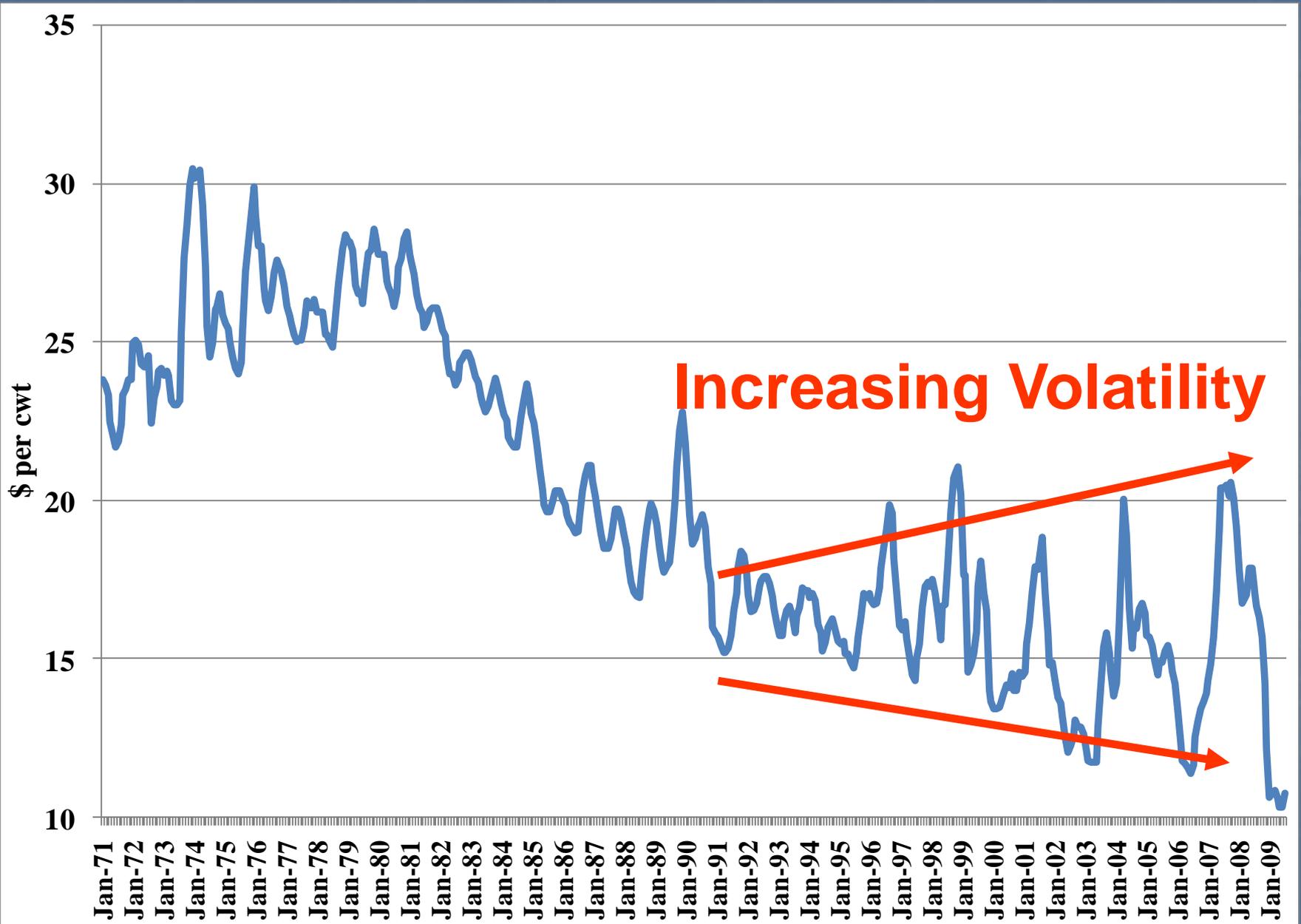
All milk: monthly real prices, Jan 1971 - Aug 2009



All milk: monthly real prices, Jan 1971 - Aug 2009



All milk: monthly real prices, Jan 1971 - Aug 2009



Michigan 2001-2008

Year	2001	2002	2003	2004	2005	2006	2007	2008
ROA (percent)	7.6	3.2	4.3	7.7	6.3	5.5	11.3	7.0
Milk Price (\$/cwt)	15.23	12.47	12.59	16.42	15.70	13.44	20.21	19.41
Purchased Feed (\$/cwt)	3.95	3.45	3.56	4.36	4.06	3.74	5.32	5.56
Total Feed Cost (\$/cwt)	6.75	7.01	7.18	7.47	8.14	8.29	9.55	12.74
IOFC \$/cwt)	8.48	5.46	5.41	8.95	7.56	5.15	10.66	6.67

Price ratio of milk to feed, Jan 2006 –Oct 2009

(feed pounds that can be purchased per pound of milk)



Monthly average number of U.S. milk cows (low to high is about 2%)

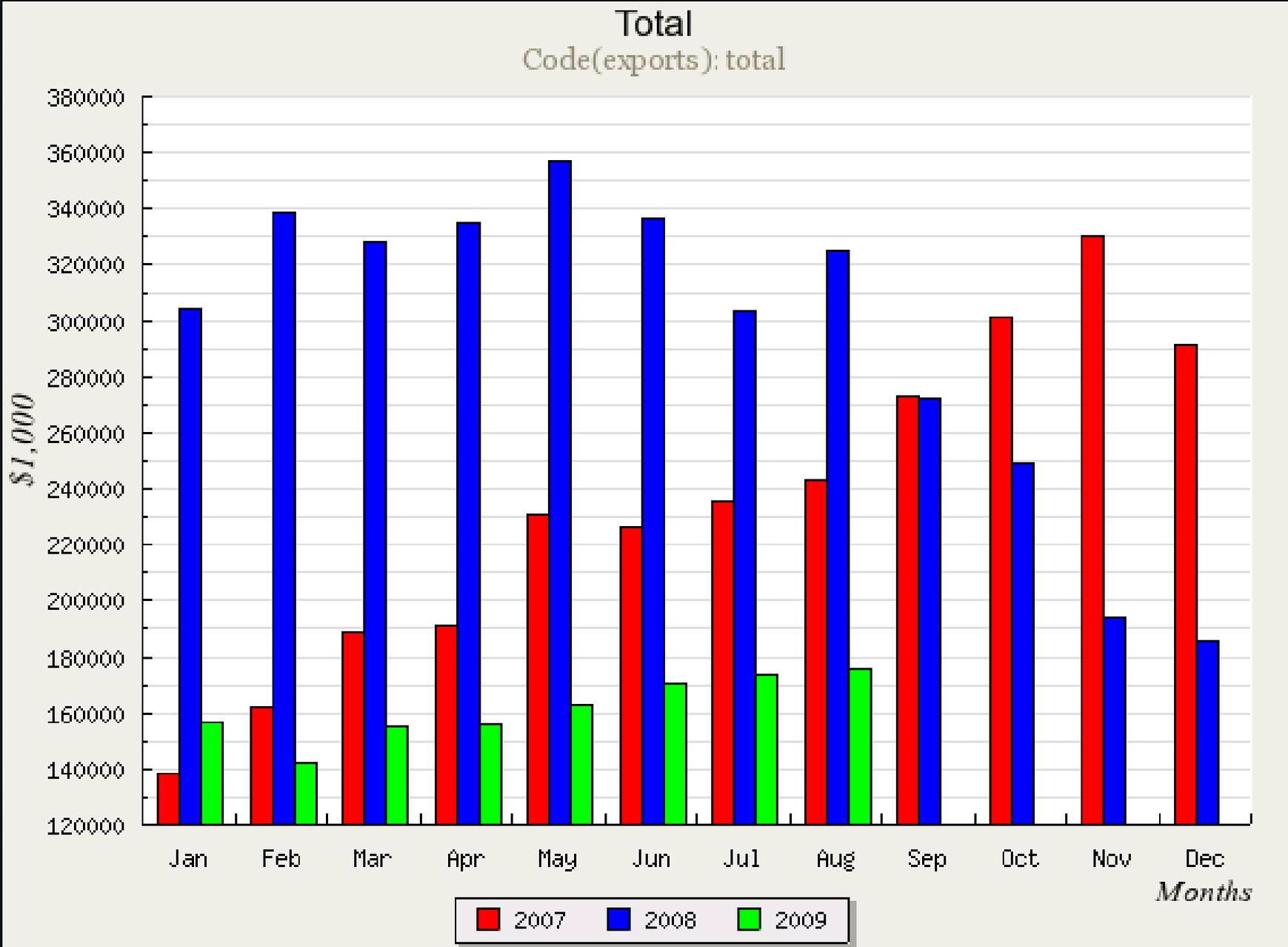


Primary reason for price collapse: Lost Export Markets

- Prior to 2004 less than 5% of production (total solids basis)
- 2004 US exported 7.5% of milk production
- Peaked at 11% in 2008

Exports

- Global economic crisis
 - shrank demand for dairy products world-wide
 - dried up credit to finance imports
- World prices for dairy products crashed—butter, nonfat dry milk, and cheese prices dropped by 50% or more between late summer and the end of 2008
- U.S exports (with the exception of dry whey) fell off sharply



Responses to Producer Losses

- Market response
- Government response
- Private response

How many cows to get to break-even?

- Beginning of 2009 consensus was 250,000-400,000 cows
- US herd down 226,000 cows through October

How many herds on the edge?

- Many herds losing \$4-6/cwt in 2009
- Small herds helped more by MILC
- Herds purchasing feed very stressed
- A great deal of financial stress in West

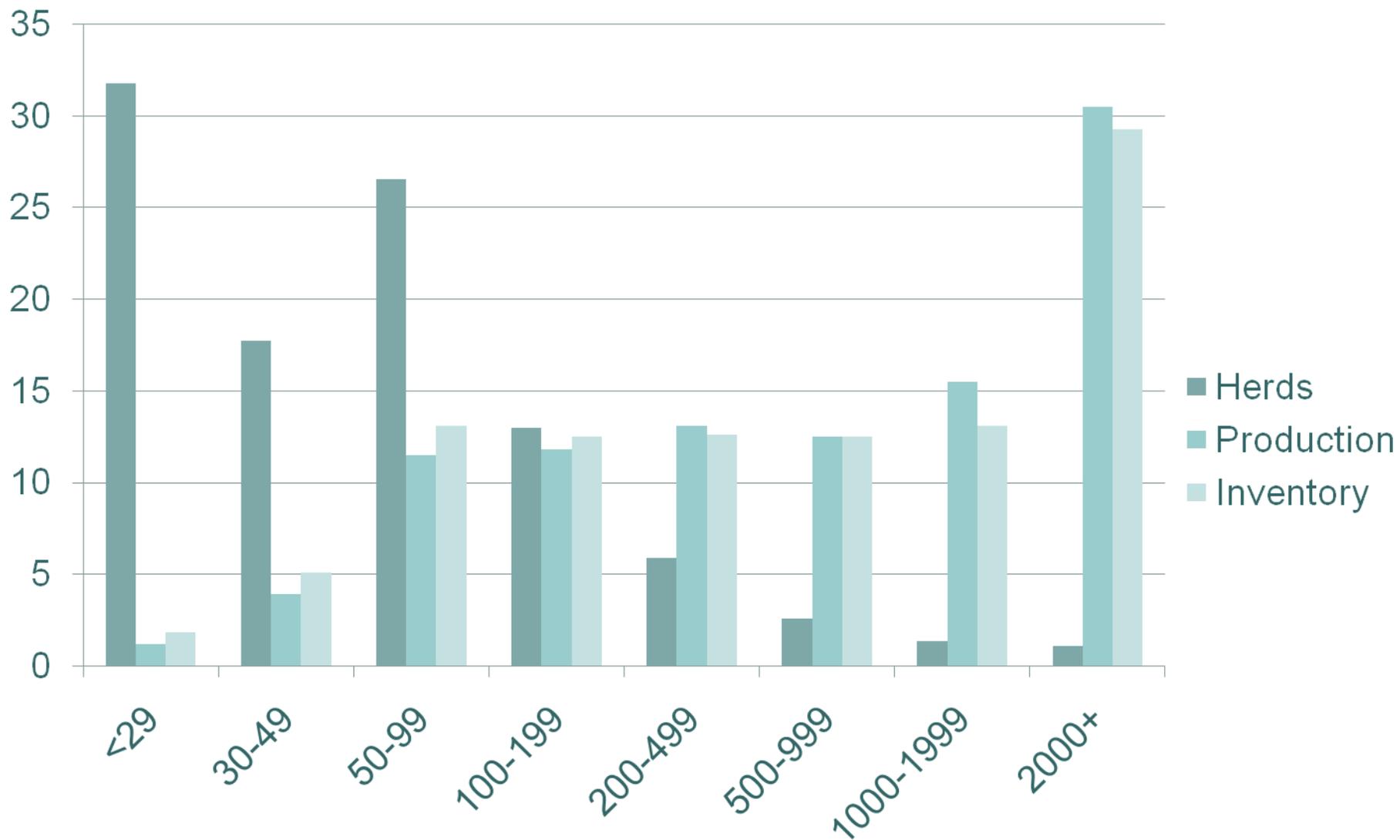
Average 2008 Michigan Dairy Farm Characteristics by Herd Size Category

	20-99 COWS	100-249 COWS	250+ COWS
Average number of cows	65	166	461
Milk sold per cow (pounds)	18,699	20,703	22,892
Average price of milk sold (\$/cwt)	19.50	19.26	19.58
Total acres owned	268	455	675
Total crop acres	379	753	1,318
Number of farms	27	55	34

2008 Michigan Dairy Farm Profitability Indicators by Herd Size

	20-99 COWS	100-249 COWS	250+ Cows
	(percent)		
Rate of return on assets*	3.7	4.2	9.4
Rate of return on equity	3.2	3.7	11.0
Operating profit margin	18.3	15.2	27.5
Asset turnover rate*	20.2	27.6	34.1

2008 US Size distribution



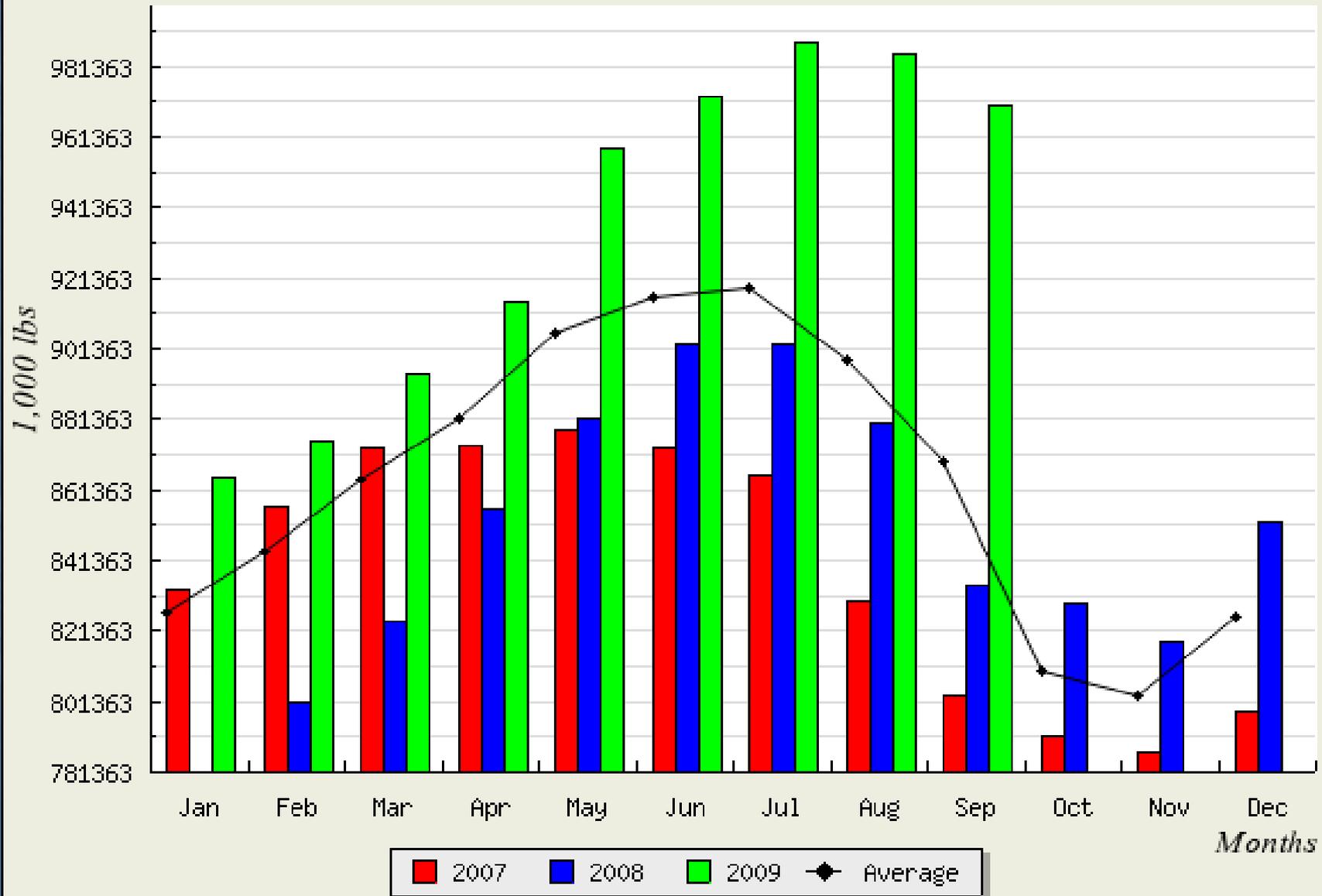
October 2009 situation

- California
 - Production down 5.3%
 - Milk cow numbers down 78,000 head
- AZ -10.6%, ID -2.7%
- WI +3.5%, MN +2.5
- US -1.1% production; -226,000 cows

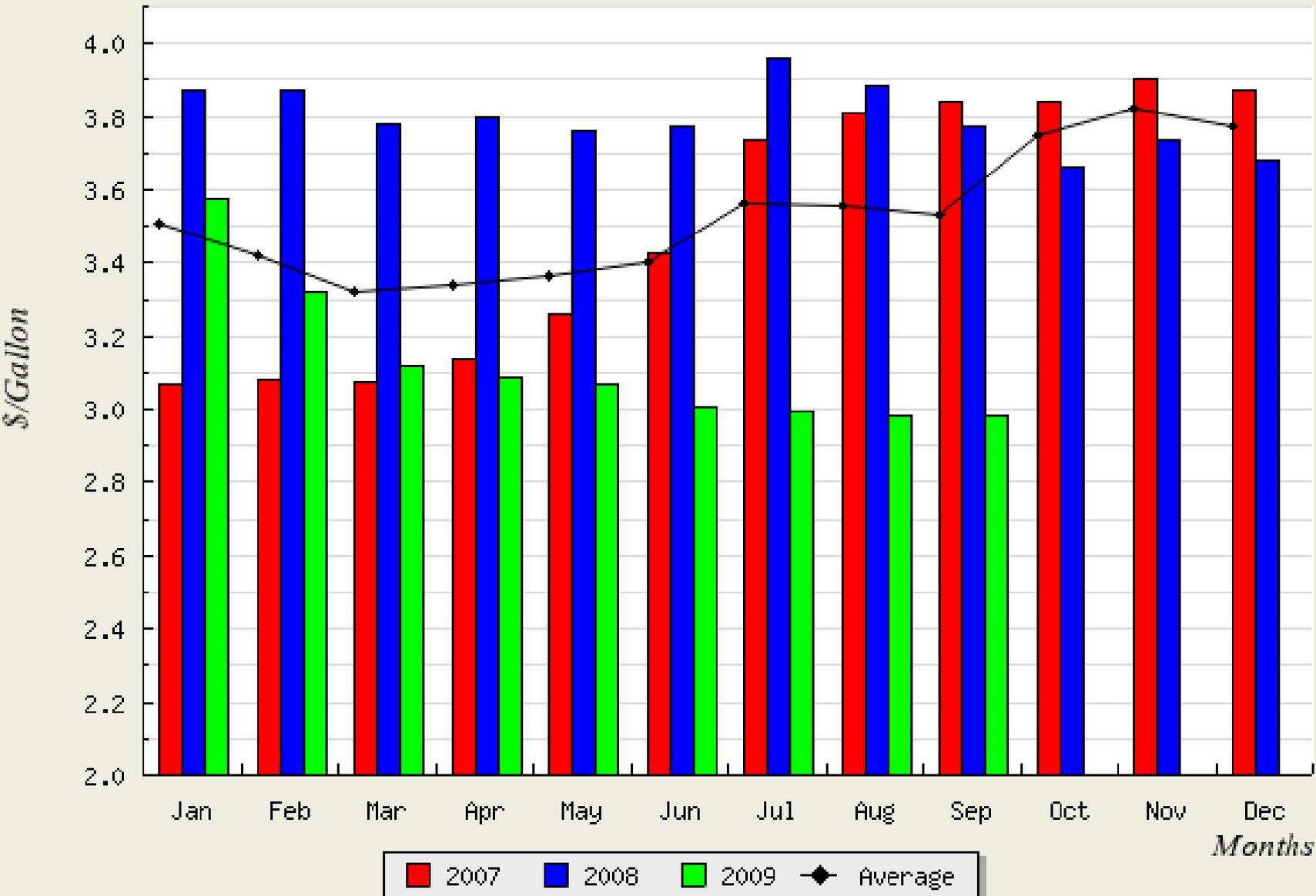
Recent production reports

- Cheddar production +8.0% in September
- Total cheese production +4.4%
- Butter production -21.9%
- NDM milk production -19.9%

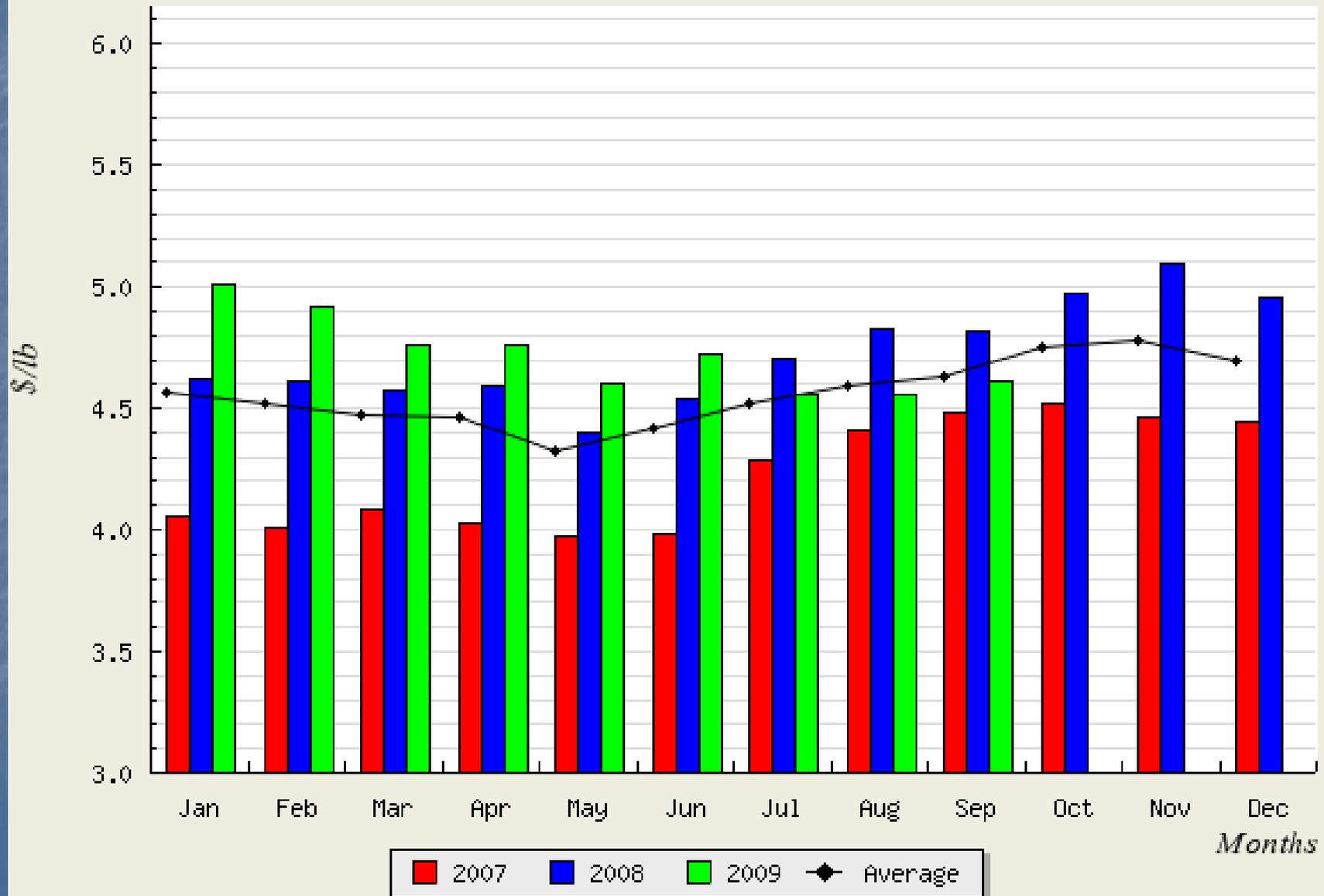
Total Natural Cheese Stocks Area: US



Fresh Whole Milk Retail Price (Gal) Area: US



Natural Cheddar Cheese Retail Price Area: US



Government policy responses

- Payments to producers (MILC) triggered by low prices will account for about 4% of dairy revenue in 2009
- Additional purchases under school lunch and international food aid programs
- A small export subsidy program was reactivated

Government policy responses

- Temporarily raised the price support purchase prices by around 15% for skim milk powder, and cheese.
- Cheddar blocks: \$1.13/lb to \$1.31/lb
- Cheddar barrels: \$1.10/lb to \$1.28/lb
- Nonfat dry milk: \$0.80/lb to \$0.92/lb

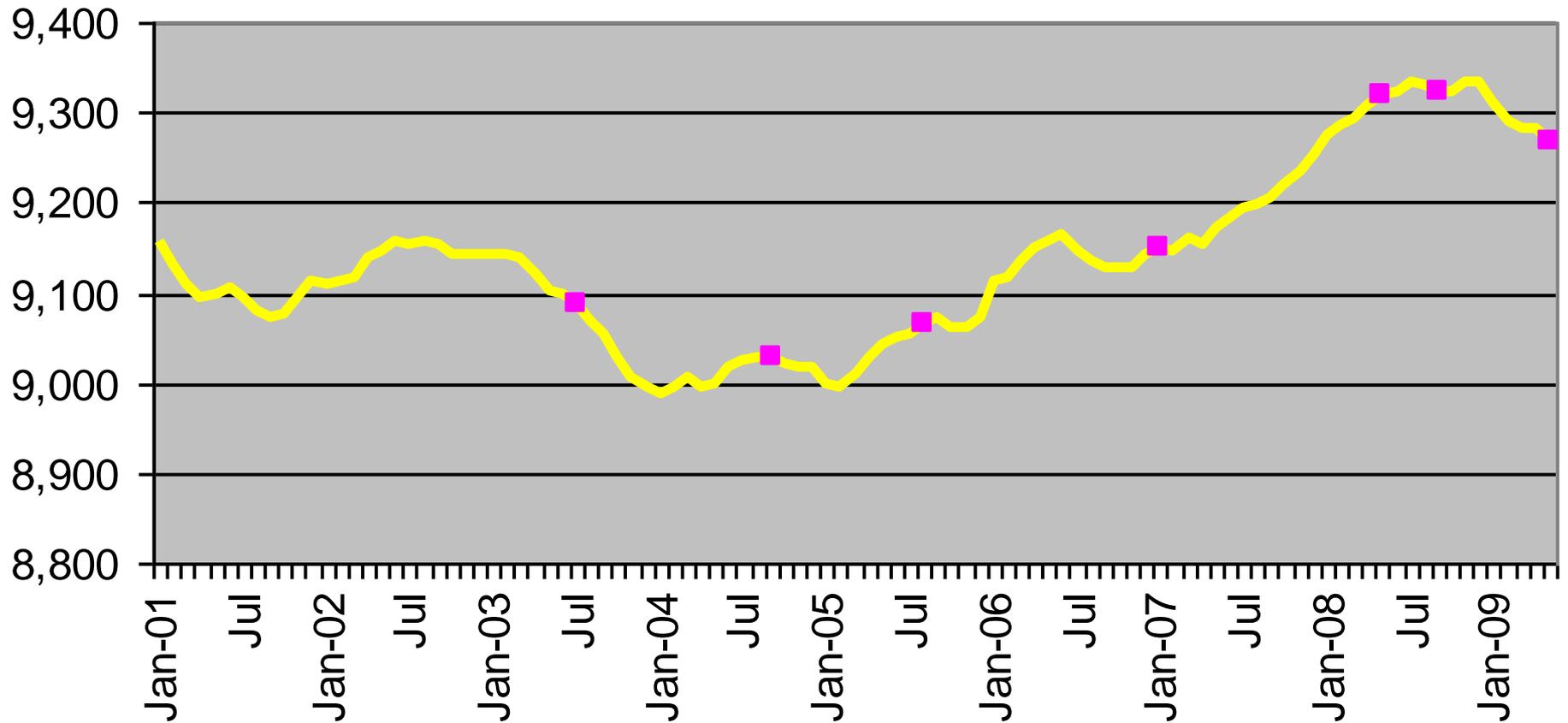
Government policy responses: Dairy "Bailout"

- \$350 million in total aid
 - \$60 million to purchase cheese
 - \$290 million in direct payments
- Senator Boxer (CA) held bill to discuss distribution
- If per farm, about \$4,800 each
- If per annual cwt, about \$0.15/cwt
 - 100 average cows means \$3,000

Industry Response: CWT

- **3 CWT Retirements in 2009**
 - Retirement 1: 101,000 cows 1.96 bil. lbs
 - Retirement 2: 74,113 cows 1.523 bil. lbs
 - Retirement 3: 26,412 cows 517 mil. lbs
-
- **Subsidized exports**

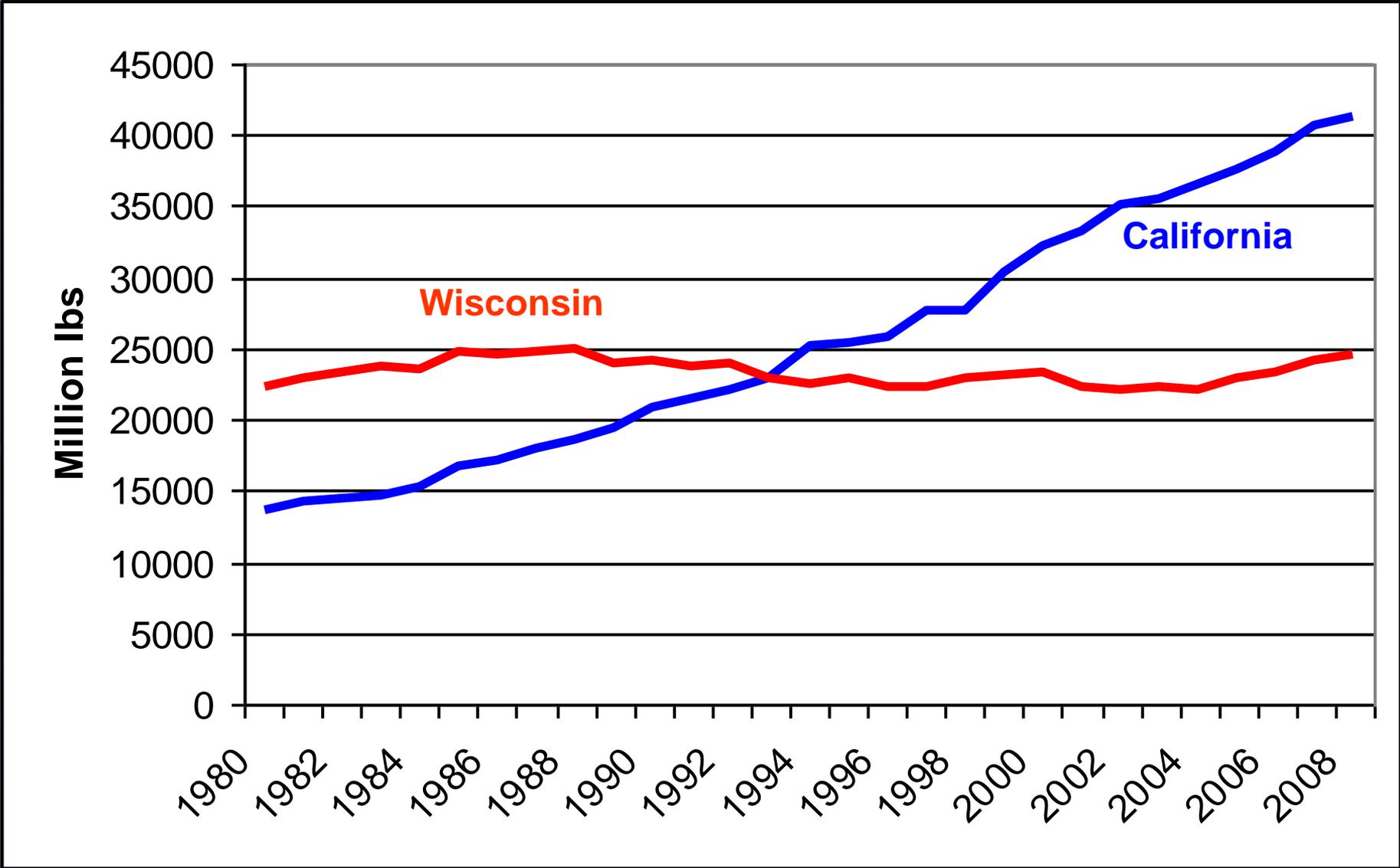
Herd Size and CWT Herd Buyouts



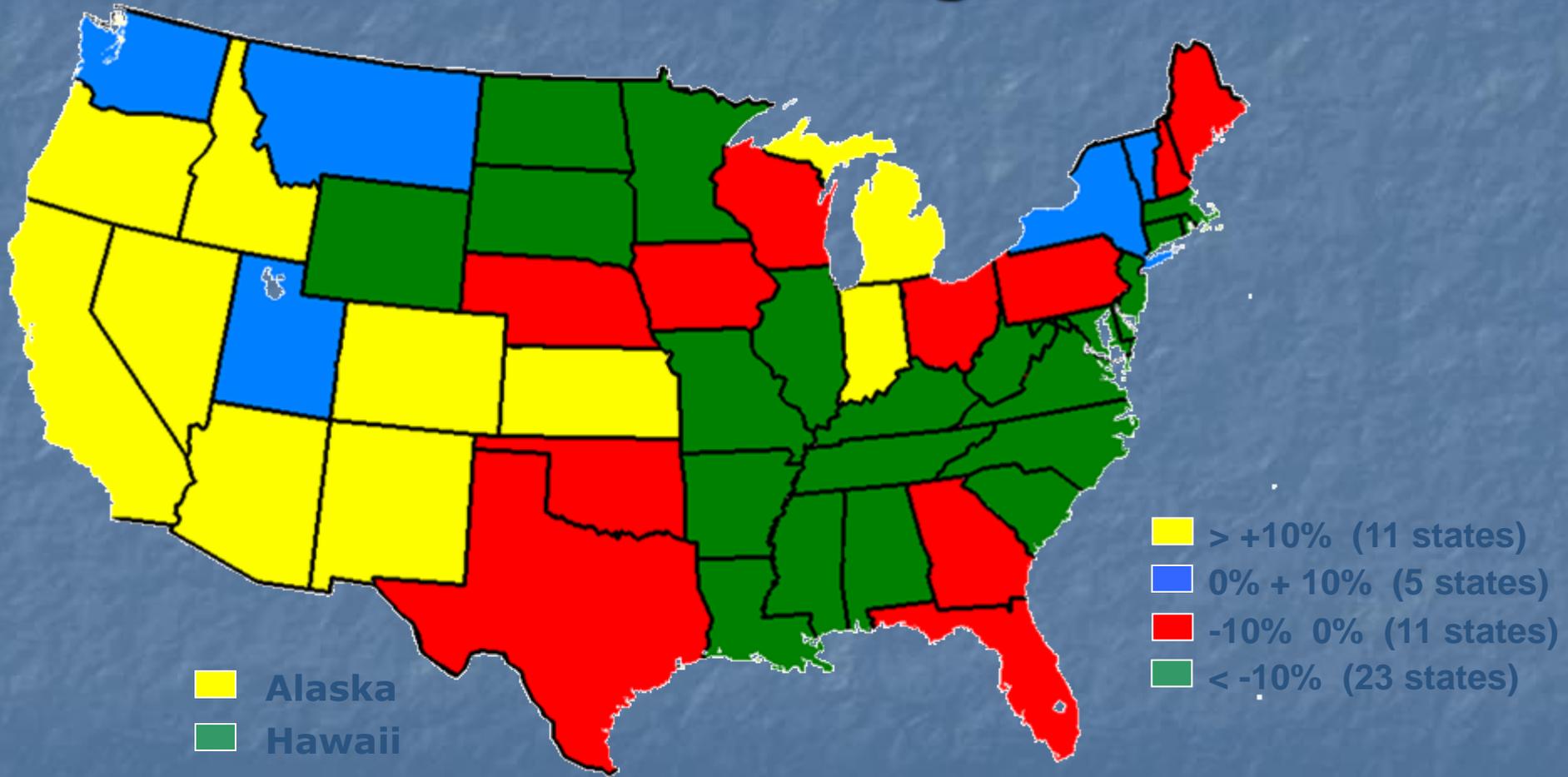
Long Term Prospects for Milk Production by Region

- Trend toward West for decades
- Traditional dairy areas hurt less by recent events
- Is West production model sustainable?
- Can Upper Midwest recover market share?

CA and WI Milk Production, 1980-2008



Milk Production Change 1995-2004



Source: USDA

Average Herd Size

<i>Year</i>	<i>U.S.</i>	<i>CA</i>	<i>WI</i>	<i>MI</i>
1959	9	39	20	12
1964	13	63	24	17
1969	20	98	28	24
1974	26	134	33	31
1978	33	173	37	38
1982	39	204	42	44
1987	50	295	47	53
1992	61	400	50	61
1997	78	530	59	80
2002	108	601	75	101
2007	133	850	88	130

Drivers of Structural Changes

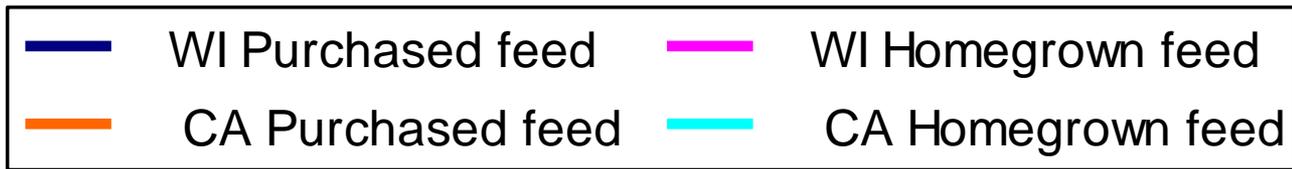
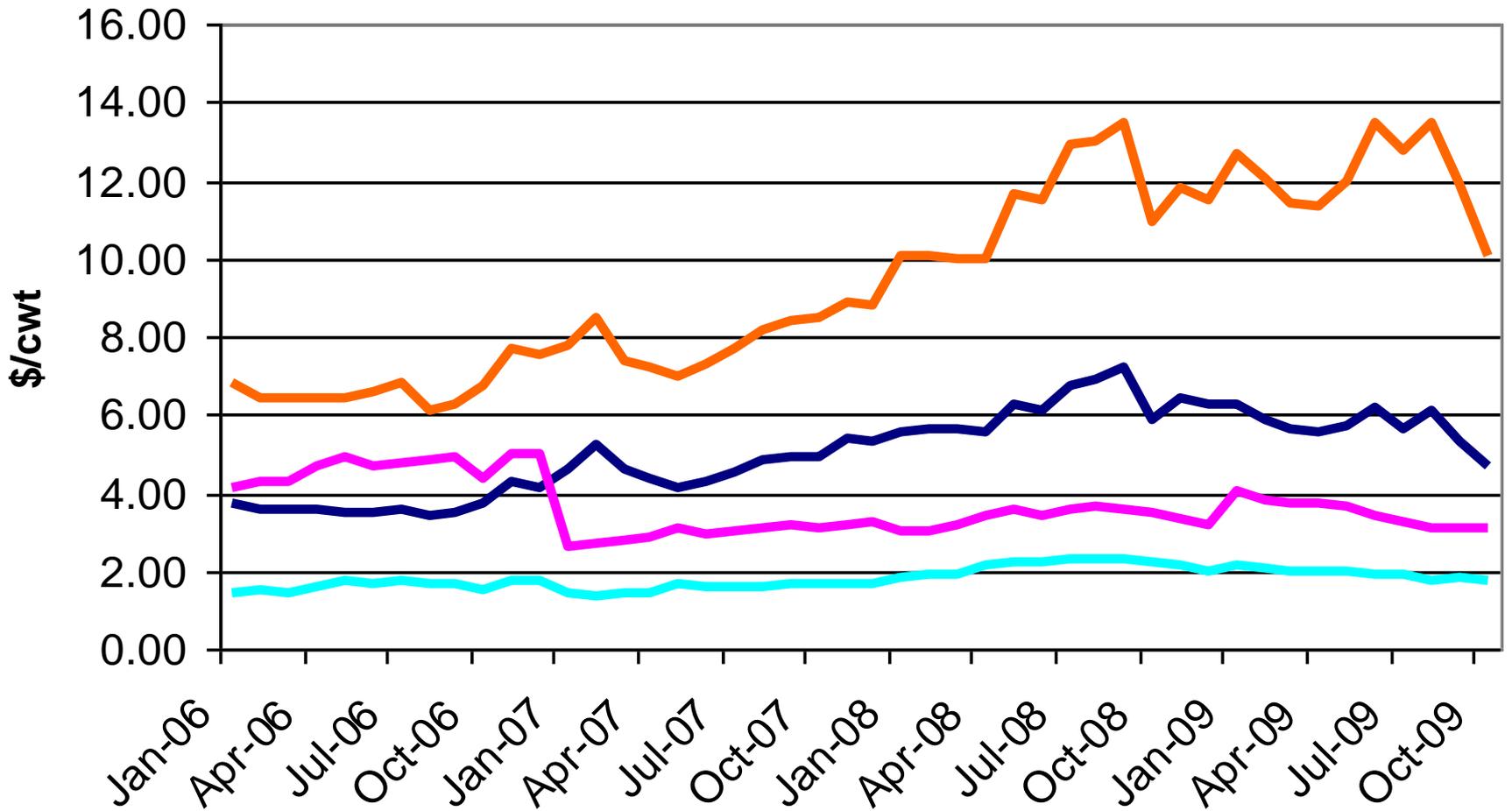
- Milk production follows population
 - Demand for fluid milk in west
- Base milk price change to market orientation
- Reactions:
 - West moved toward cheese
 - Upper Midwest slow to adopt production technology

Drivers of Structural Change

- Management opportunity cost
- Labor efficiency
- Asset fixity—no major wealth effect from urban encroachment
 - Production technology jointly determined with herd size

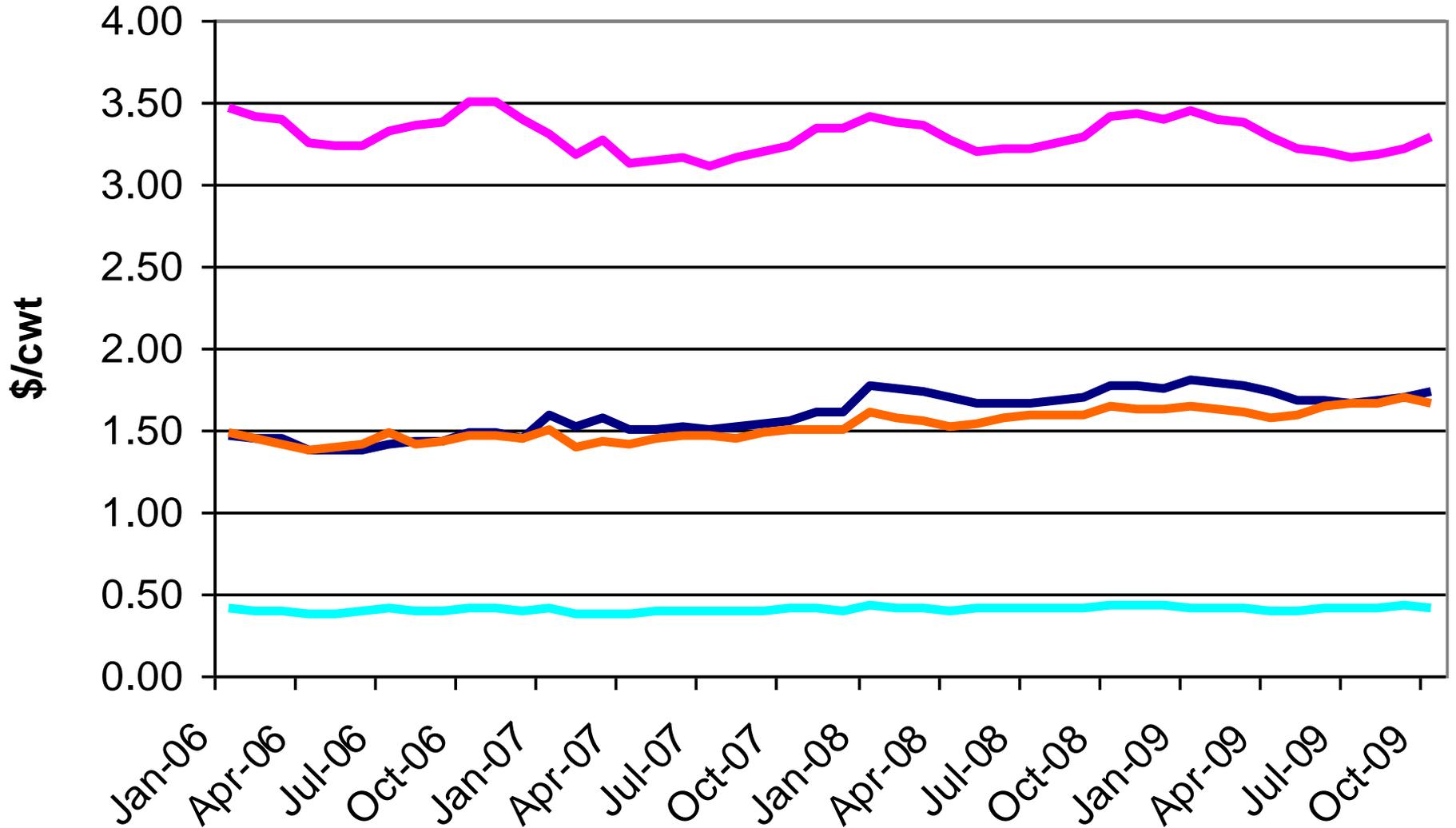
Upper Midwest Dairy Industry: Strengths

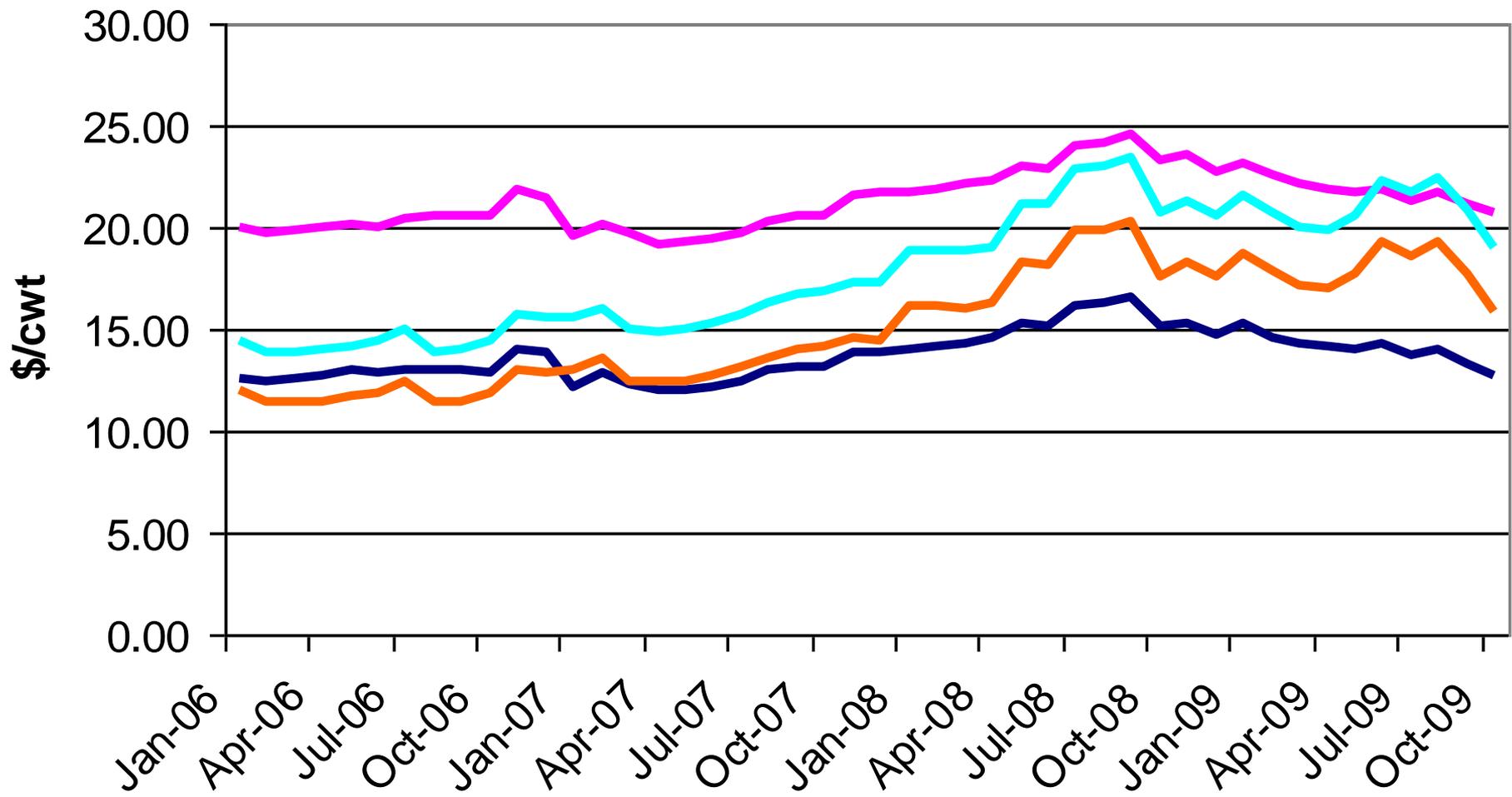
- Favorable climate, ample water
- Ability to produce high quality forages
- Extensive dairy infrastructure
- Supportive dairy organizations
- Location relative to major markets
- Strong quality reputation
- High milk price
- Dairy Tradition

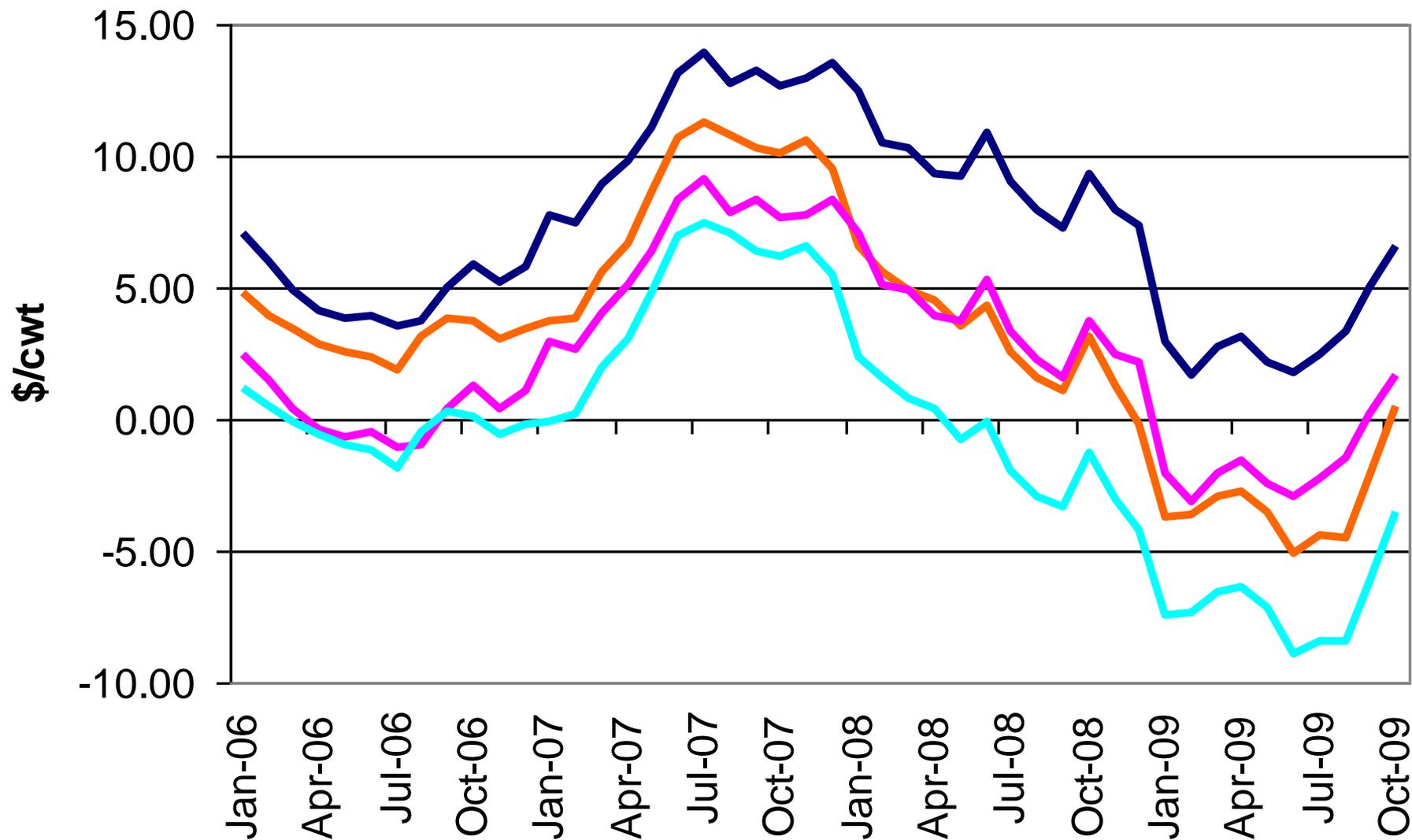


Upper Midwest Dairy Industry: Weaknesses

- Higher average cost of production
- Lower average per-cow milk yields
- Aging dairy production facilities
- Aging dairy processing facilities
- High milk price
- Dairy tradition







Upper Midwest Dairy Industry: Opportunities

- Growing cheese market, small and mid-sized specialty cheeses
- Higher-value uses of whey
- Modernization of farm and processing facilities can overcome many weaknesses

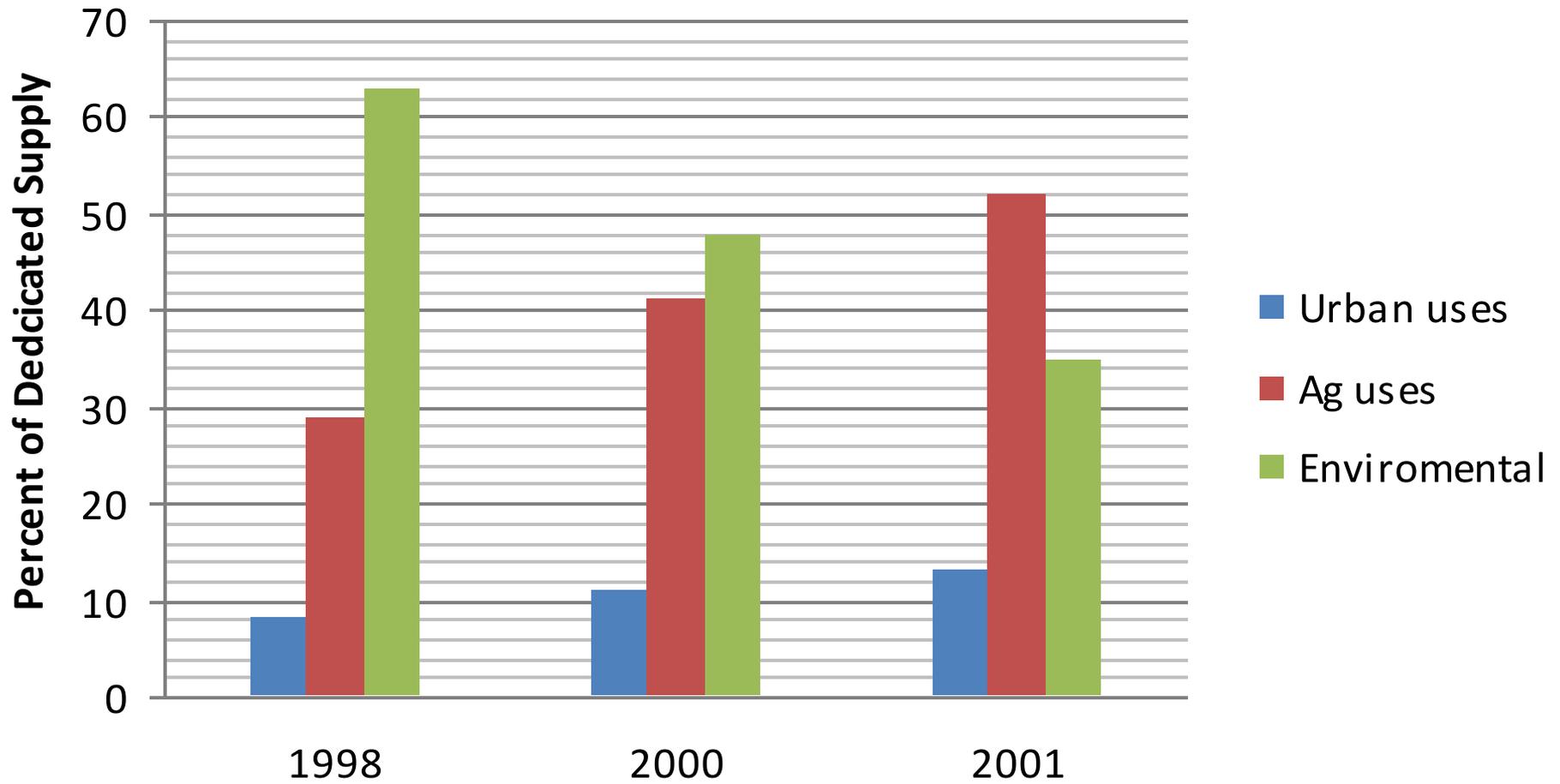
Wisconsin Dairy Modernization

- Low interest loans for modernizing farms and processing plants
- Room for a large increase in milk per cow
- “Medium” sized specialty cheese plants an opportunity

Upper Midwest Dairy Industry: Threats

- Escalating land prices
- Restrictive environmental regulations
- Outbidding for dairy plant location
- Overzealous animal rights activists

California Water Use



Conclusions

- Dairy cycle currently bust
 - Many herds on edge of solvency
- West hurt by disproportionately by purchased feed costs and lack of water
- Upper Midwest has many comparative advantages and opportunities