

A Perspective on the Northeast Dairy Industry

David Galton
Cornell University

Sustainable Agriculture

- Profit for farm families
- Produce for market demands
- Environmentally sound
- Public acceptance

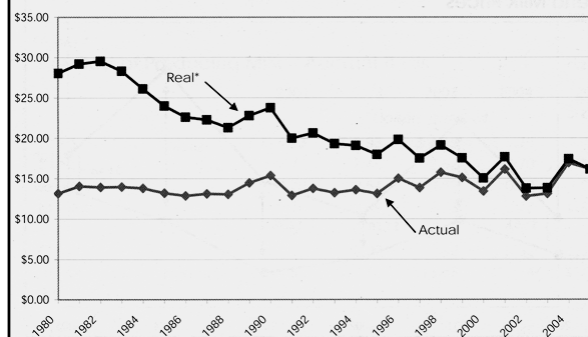
Farm Profitability (family income)

- Needs to increase yearly
- Why
 - Ever increasing costs of living (inflation)
 - Ever increasing costs of producing milk relative to milk price

Cost of living since 1970 relative to rate of inflation

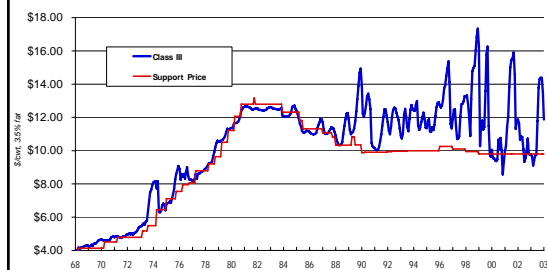
Year	Cost of Living	
2005	\$59,270	\$79,078
2000	51,658	68,922
95	45,710	60,986
90	39,203	52,305
85	32,227	43,064
80	24,711	32,970
75	16,133	21,524
70	11,649	15,535

Farm Milk Prices per Cwt.



Source: NE Dairy Farm Summary '05 – Farm Credit

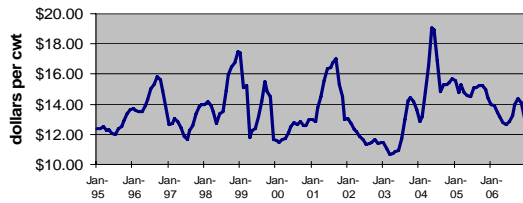
Manufacturing Grade Milk at 3.5% fat test



Source: Cornell Program on Dairy Markets and Policy

The Milk Price Roller Coaster!

Price Cycles: Order 1 Blend Prices at Central NY, Actual Jan 95-Dec 06



Commercial Milk and Dairy Product Sales

Year	Commercial sales (billion pounds)
1960	123.1
1970	117.0
1980	128.0
1990	147.7
2000	169.1
2005	176.6
2006	180.0

Statistics of New York and United States Dairy Industry

	Number of Farms	Number of Cows	Annual milk production per cow	Total milk supply
New York				
1950	60,000	1.36 million	5,300 lbs.	10.4 billion lbs.
1990	13,000	755,000	14,658 lbs	11.0 billion lbs.
2000	7,238	686,000	17,376 lbs	11.9 billion lbs.
2005	6,430	648,000	18,639	12.1 billion lbs.
United States				
1950	3.6 million	21 million	5,300 lbs.	105 billion lbs.
1990	194,000	10 million	14,600 lbs.	139 billion lbs.
2000	83,025	9.21 million	18,204 lbs.	167.7 billion lbs.
2005	64,555	9.1 million	19,576 lbs.	176.6 billion lbs.

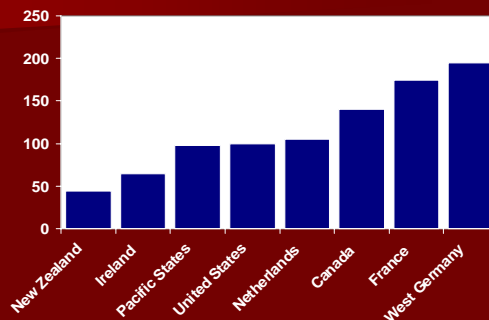
Milk Production United States

Year	Average Herd Size
1950	5.8
1960	9.2
1980	39.1
1990	52.3
2000	110
2005	140

Milk Production in the Five Largest Dairy States; 1960 - 2005

	1960	1970	1980	1990	2000	2005
(Billion Lbs.)						
California	8,059	9,457	13,577	20,947	32,273	37,564
Wisconsin	17,780	18,435	22,380	24,187	23,259	22,866
New York	10,171	10,341	10,974	11,067	11,921	12,078
Pennsylvania	6,878	7,124	8,496	10,014	11,156	10,503
Idaho						10,161

Comparison of International Milk Production Costs



$$\text{Profit (growth)} = \frac{\text{Volume X (Income - Costs)}}{\text{Capital Investment}}$$

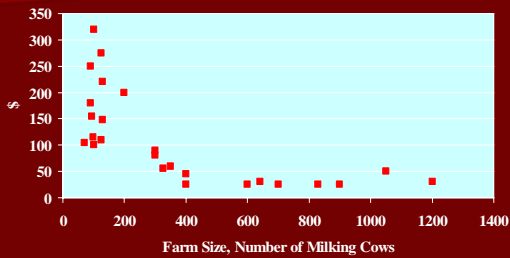
Effects of purchasing a new pickup truck by herd size on yearly debt payment per cow.¹

Herd Size	Yearly debt Interest payment per cow ²	
	0%	9%
50	\$150	\$185.00
200	\$37.50	\$46.00
500	\$15.00	\$18.50
1000	\$7.50	\$9.00

¹Purchase price \$30,000; 4 year payment schedule.

²Payment includes both principal and interest

Manure Spreading Costs, dollars per cow per year



Combined Annual Capital and Labor Cost Per Hundredweight

Parlor Type	Dollars/Hundredweight					
	2X Milking			3X Milking		
	8h	16h	24h	8h	16h	24h
HD 6	\$1.42	.98	.85	\$2.34	1.44	1.22
PD 16	.82	.51	.41	1.34	.73	.59
PDd 40	.66	.43	.36	1.09	.63	.51

Amount required per hundredweight of milk needed for every \$10,000 of family living.

Herd Size	Milk Sold Per Cow Per Year (pounds)						
	14,000	16,000	18,000	20,000	22,000	24,000	26,000
50	\$1.42	\$1.25	\$1.11	\$1.00	\$.90	\$.83	\$.76
75	.95	.83	.74	.66	.60	.55	.51
200	.35	.31	.27	.25	.22	.20	.19
500	.14	.12	.11	.10	.09	.08	.07
800	.08	.07	.06	.06	.05	.05	.04
1000	.07	.06	.05	.05	.04	.04	.03
2000	.03	.03	.02	.02	.02	.02	.01
5000	.01	.01	.01	.01	.009	.008	.007

2004 Income & Expenses/ Cwt (Selected)

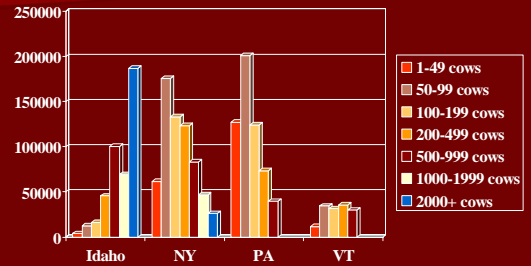
	Top 25%		Top 20%
	CA	ID	
Income			
Milk	\$14.83	\$16.04	\$16.85
Cost			
Labor	1.15	1.42	2.39
Feed	5.98	5.86	?
Replacement	1.28	1.39	2.10
Milk Hauling	.26	.24	.45
bST	.10	.20	.45
Utilities	.23	.17	.29
Taxes	.14	.16	.16
Vet/Breeding	.22	.29	.74
Net Income	3.57	3.03	4.30
Ave Herd Size (#)	2,730	1,839	711
Cows/worker (#)	147	135	49
Milk sold/cow (#)	21,275	21,600	22,684
Turnover rate (%)	34.5	35.1	34.0

Idaho at a glance.....

- 472,000 cows on 725 permitted dairies shipping 21,500+ lbs/cow/yr
 - Top producers ship >85#/day (milking herd)
 - 26-27,000# shipped per year
- 10,156 million pounds of milk sold in 2005
 - Up 11.7% over 2004
 - Ranks 5th for the year overall
 - Third in near future!

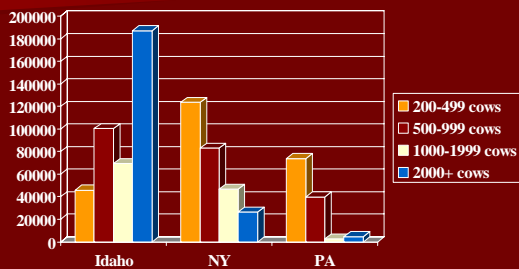
2006 NEDPA Conference – Lormore and Cady

Cow Distribution by Herd Size



2006 NEDPA Conference – Lormore and Cady

Cow Distribution 200+ cow herds



2006 NEDPA Conference – Lormore and Cady



Northeast Dairy Industry Situation: Current and Future!

Northeast Dairy Industry

Processor Capacity and Output

- Largest processor of milk beverages
- Largest processor of high value products (i.e. ice cream, yogurt)
- Northeast cheddar cheese is a value-added product

20% of U. S.
population

3.4% increase
in total milk
production

6 billion pounds
milk deficit



23% of U. S.
Population

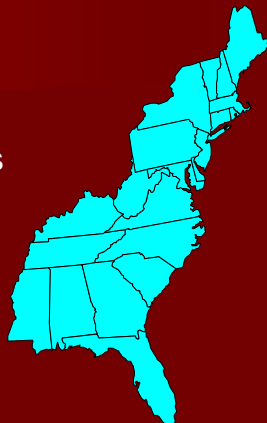
12.2%
decrease in
total milk
production

25 billion
pounds
milk deficit



43% of U. S.
Population

31 billion pounds
milk deficit



Markets

■ Proximity to Markets

- Cost advantage in marketing
 - Fluid milk
 - \$.42/cwt for every 100 miles
 - Cheese (from California)
 - \$.50 to \$.80/100 lbs. – truck, train

Challenge

Provide more milk

- Processing plant capacity
- Encourage companies to invest

Northeast Dairy Industry

Production segment

- Marginal profits/cwt. of milk
- Forage production
- Abundant water
- Cow environment
- Enterprise diversification
- Heifer supply

Northeast Dairy Industry

Production segment

Challenges

- Capital investment
- Milk production and profit per cow
- Herd size growth
- Efficiencies

New York Crops Industry 2004 NY Ag Statistics

	Acres
Silage Corn	500,000
Grain Corn	480,000
Wheat	140,000
Oats	60,000
Rye	7,000
Barley	10,000
Soybean	132,000
Vegetable Processing	77,000
Vegetable Fresh Market	79,000

Dairy Farm Profitability

	Net Earnings per Cow*	Return on Assets*	Return on Equity*
2001	\$ 384	7.3%	7.8%
2002	31	1.9%	0.6%
2003	41	1.9%	0.8%
2004	508	7.5%	9.1%
2005	339	5.4%	5.5%
5-Year Ave	\$261	4.8%	4.8%

*Net Earnings include non-farm income

*Return on Assets = (Net Earnings + Interest)/Average Total Assets

*Return on Equity = Net Earnings/Average Farm Net Worth

Source: NE Dairy Farm Summary '05 – Farm Credit

The Cost of Producing Milk – Accrual Basis

	2001	2002	2003	2004	2005
	Dollars per Cwt.				
Feed	\$ 4.23	\$ 3.93	\$ 4.19	\$ 4.76	\$ 4.23
Labor	2.47	2.46	2.52	2.70	2.72
Interest	0.76	0.54	0.52	0.50	0.60
Marketing	0.70	0.69	0.73	0.78	0.82
Crop	0.89	0.79	0.80	0.87	0.97
Other	5.45	5.00	4.92	5.53	5.74
Adjusted Cash Operating Expenses	\$ 14.52	\$ 13.42	\$ 13.68	\$ 15.14	\$ 15.08
Depreciation	1.15	1.14	1.14	1.22	1.27
Family Living	0.95	0.92	0.83	0.82	0.89
Total Costs	\$ 1662	\$ 15.48	\$ 15.65	\$ 17.18	\$ 17.24
Non-milk income	2.11	2.59	2.53	2.65	2.69
Net Cost of Production	\$ 14.51	\$ 12.89	\$ 13.12	\$ 14.53	\$ 14.55

Source: NE Dairy Farm Summary '05 – Farm Credit

Dollars per Cwt of Milk	2004 Actual DFS	2005 Actual DFS	5-Year Average DFS
Feed Cost	\$ 4.76	\$ 4.23	\$ 4.27
Petroleum-Related Products*	1.73	1.96	1.66
Interest Expense	0.49	0.60	0.58
All Other Operating Costs	7.55	7.76	7.41
Net Cost of Production	\$ 14.53	\$ 14.55	\$ 13.92
Milk Price	\$ 16.95	\$ 16.12	\$ 15.02
Spread between Milk Price and Net Cost of Production	\$ 2.42	\$ 1.57	\$ 1.10

* Includes fertilizer, freight and trucking (marketing) and gasoline/fuel
Source: NE Dairy Farm Summary '05 – Farm Credit

Labor Productivity Spurs Profits						
Pounds of Milk Sold per Worker	% of Farms	Number of Cows	Cows per Worker	Milk Sold per Cow	Avg. Labor & Family Living Per Person	Adjusted Net Earnings Per Cow
500,000 or less	10	81	24	17,001	17,001	(\$218)
500,000-600,000	11	91	31	18,671	24,473	(70)
600,000-700,000	12	117	35	19,327	26,064	(28)
700,000-800,000	12	180	37	20,368	30,836	39
800,000-900,000	14	214	42	20,638	29,649	148
900,000 – 1million	11	264	45	21,580	34,931	199
1-1.1 million	8	310	51	21,001	38,560	318
1.1 million	21	440	58	22,917	40,868	444

Source: NE Dairy Farm Summary '05 – Farm Credit

Farm Size and Profitability				
	89 Cows or Less	90-149 Cows	150-299 Cows	300 Cows or More
Avg No. of Cows	65	155	209	537
Milk Sold Per Cow (lbs.)	19,494	19,777	20,951	22,441
Milk Sold Per Worker (lbs.)	643,300	758,133	875,760	1,095,509
Milk Price per Cwt.	\$ 15.91	\$ 16.03	\$ 16.25	\$ 16.11
Cost of Production per Cwt.	\$ 16.55	\$ 15.94	\$ 15.43	\$ 14.49
Assets per Cow	\$ 12,715	\$10,798	\$ 9,835	\$7,904
Asset Turnover	0.29	0.34	0.40	0.52
Percentage Net Worth	79%	76%	75%	68%
Net Earnings per Cow	\$ 121	173	249	\$ 475
Return on Assets %	2.2%	3.0%	3.9%	7.4

Source: NE Dairy Farm Summary '05 – Farm Credit

Northeast Dairy Industry Choices

- Provide a greater supply of higher quality milk to meet market needs
- Lose markets to other regions

Northeast Dairy Industry Choices

- Industry better utilize current resources
- Manage for average values and not be profitable long-term

Northeast Dairy Industry Choices

- Recognized as a growing, competitive, profitable dairy region
- Maintain status quo, growth and attitudes

