

Dairy Farming in New England at the Start of the 21st Century

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New England Dairy Farms

Average

- 90-100 cows
150-200 animals
- 1,750,000 lbs milk
17,500 lbs/cow
- 250-300 crop acres
- 2.5-3 workers with
unpaid family labor

Better Managed

- 200 cows
330-400 animals
- 4,181,000 lbs milk
20,905 lbs/cow
- 400-450 crop acres
- 4.5-5 worker
equivalents

200 Cow Dairy

New England, NDFS Average 2000-02

Assets	\$ 1,644,200	Liabilities	\$ 531,600
Dairy herd	\$ 327,000	Net Worth	\$ 1,112,600
Machinery	241,300	Percent Net Worth	68%
Real estate	751,000		

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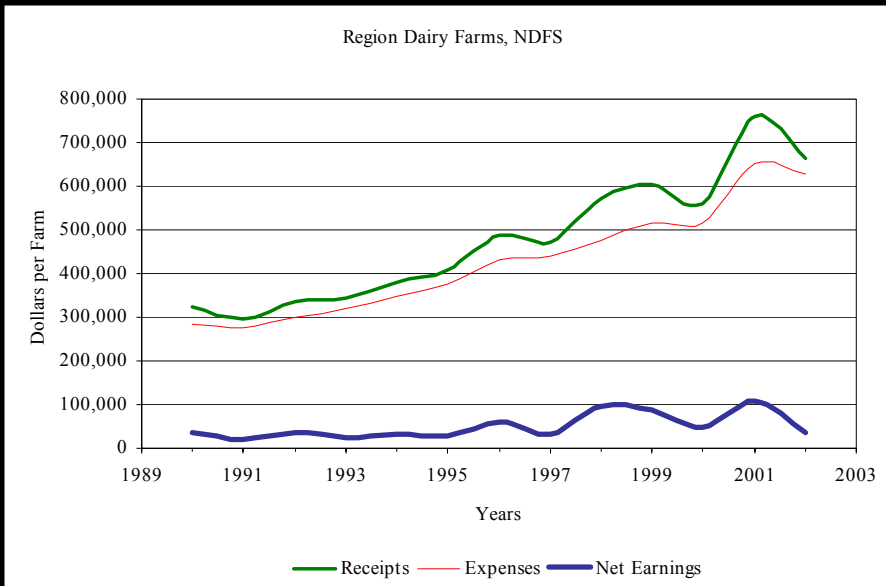
200 Cow Dairy

New England, NDFS Average 2000-02

<u>Business Receipts</u>		<u>Business Expenses</u>	
Milk @ \$14.60	\$610,470	Feed	\$182,350
Cattle	29,630	Hired labor	102,320
Other	<u>70,330</u>	Supplies	42,390
Total	\$ 710,430	Repairs	40,230
		Interest	31,830
		Freight, tucking	30,150
		Depreciation	44,160
		Other	<u>174,910</u>
		Total	\$ 648,340
Accounting Profit	\$62,090		

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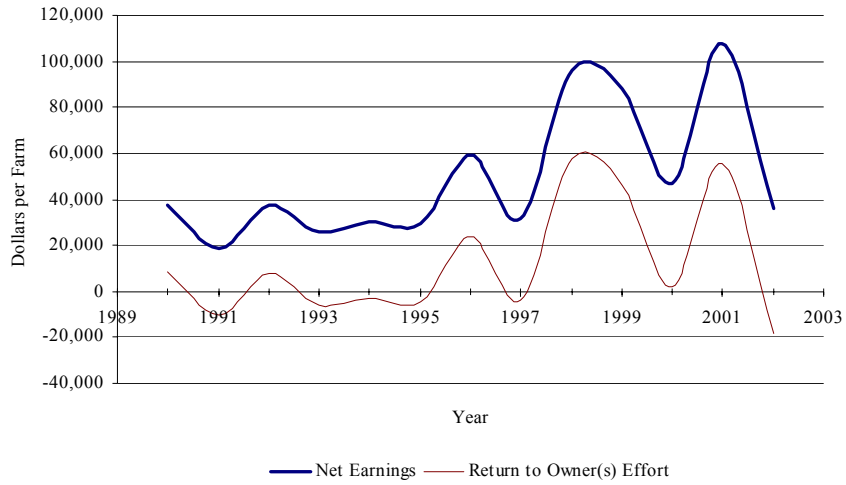
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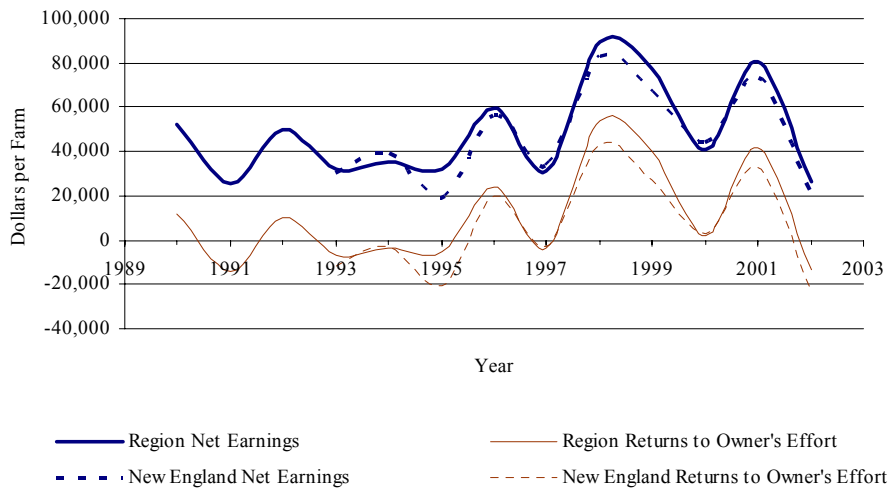
New England 200 Cow Dairy

- Net Earnings \$ 62,090
Returns to Owner's Net Worth and
to Owner's Labor & Management Effort
- Net Worth \$1,112,600 @ 5% \$ 55,630
Leaves \$ 6,460 for owner's "salary"
- Family living & income taxes estimated at \$ 42,030
Leaves \$ 20,060 for returns to net worth, under 2%

Region Dairy Farms, NDFS



Representative 150 Cow Farm



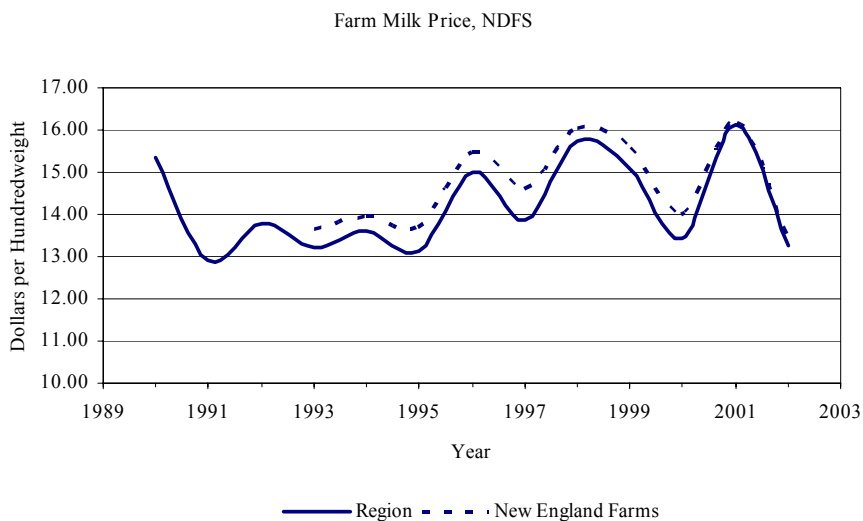
New England 200 Cow Dairy

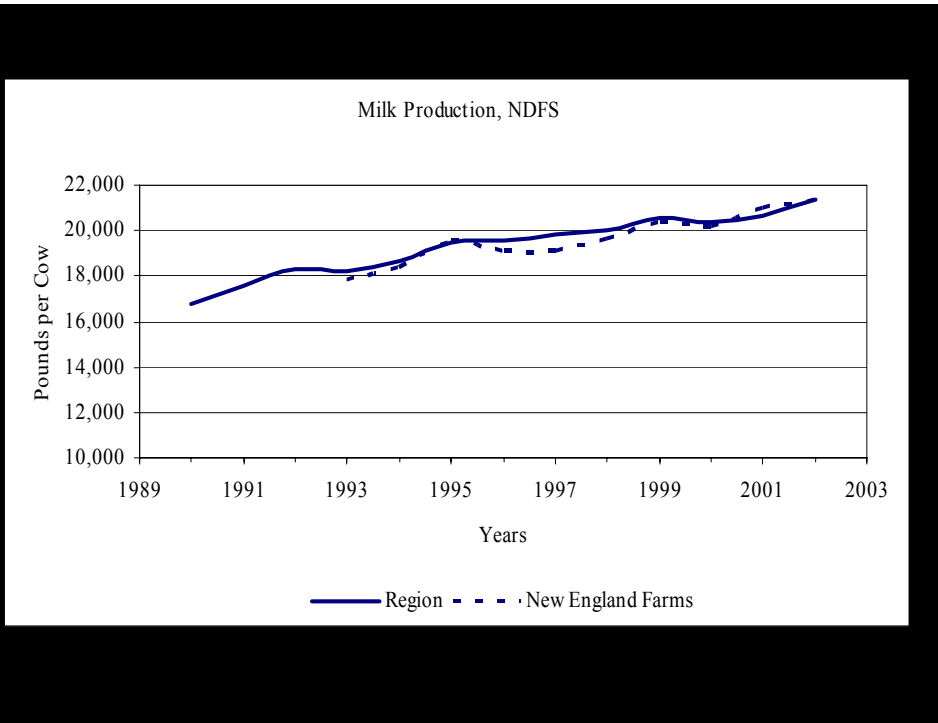
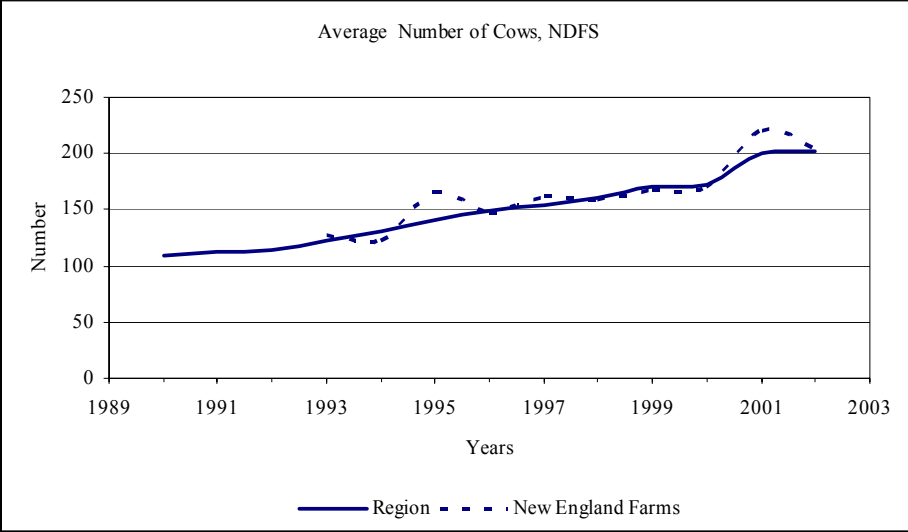
- Impact of price drop of \$1 per hundredweight or about a 7% drop in price
- Net Earnings fall \$ 41,860
Goes from \$ 60,090 to \$ 20,230

Make up for lower price by increasing production per cow, adding cows, lowering cost, delaying payments, ceasing improvements

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Cost of Producing Milk

- Economic cost of production
- Basic Calculation
 - Accrual Operating Expenses (adjusted cash expenses)
 - Plus Depreciation
 - Plus Owner's Draw (family living & income taxes)
 - Plus Return on Owner's Equity
 - Minus Non-milk Income (cattle & crop sales, other income)

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200 Cow Dairy Cost of Production NDFS Avg. 2000-02

	Farm	Cow	CWT
Accrual operating expenses	\$ 604,180	\$ 3,020	\$ 14.43
+ Depreciation	44,160	220	1.05
+ Family living expenses	42,030	210	1.01
+ Return on equity @ 5%	55,630	280	1.33
- Non-milk sales	99,960	500	2.39
Cost of Production	\$ 646,040	\$ 3,230	\$ 15.43

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New England Cost of Production, NDFS

Year	Per Hundredweight		
	2002	2001	2000
Accrual operating expenses	\$ 14.04	\$ 14.98	\$ 14.23
+ Depreciation	1.05	1.01	1.12
+ Family living expenses	0.98	0.90	1.17
+ Return on equity @ 5%	1.35	1.28	1.37
- Non-milk sales	2.30	2.15	2.81
Cost of Production	\$ 15.12	\$ 16.02	\$ 15.08

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Northeast Cost of Production NDFS Avg. 2000-02

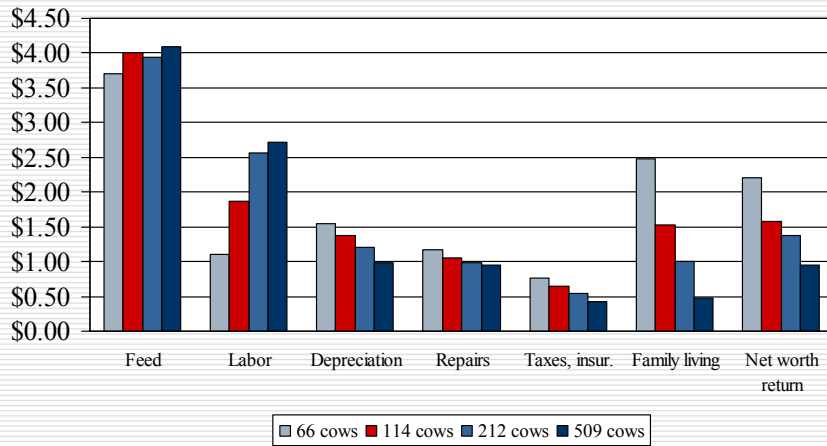
Size Group	89 or less	90 to 149	150 to 299	300 or more
Average cows	66	114	212	509
Pounds milk	1,245,855	2,266,665	4,402,703	11,052,357
Milk per cow	18,775	19,825	20,807	21,715
Farm	\$ 205,576	\$ 355,303	\$ 661,879	\$ 1,588,409
Cow	3,098	3,108	3,128	3,121
Hundredweight	16.50	15.68	15.03	14.37
Milk price	\$ 14.42	\$ 14.38	\$ 14.28	\$ 14.24

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Northeast Cost of Production

NDFS Avg. 2000-02

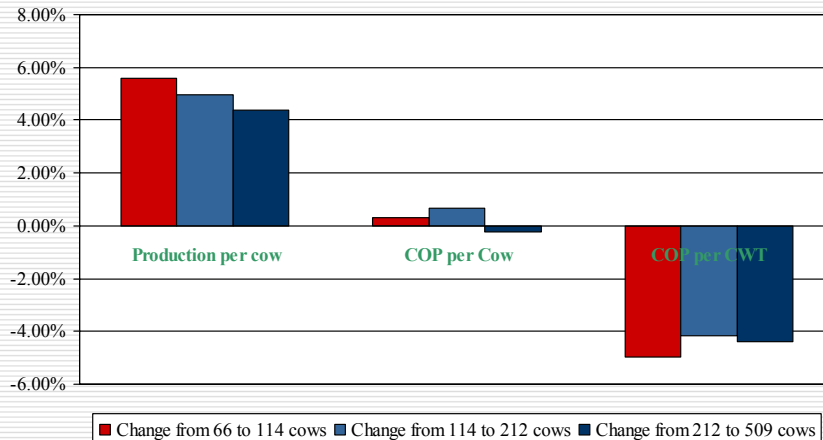


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Northeast Cost of Production

NDFS Avg. 2000-02



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Cost of Producing Milk NY Business Summary

- **Whole Farm Method**
 Accrual Operating Expenses plus Expansion Livestock
 Minus Accrual Non-milk Receipts
Equals Operating Cost of Producing Milk

 Plus Machinery and Building Depreciation
 Plus Opportunity Cost of Equity
 Plus Value of Unpaid Family Labor
 Plus Value of Operator's Labor & Management
Equals Total Cost of Producing Milk

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Total Costs of Production per CWT NY Business Summary

Farm Size (avg. cows)	1999	2000	2001
Less than 50 (40, 38, 39)	\$ 18.36	\$ 17.88	\$ 18.96
50 o 74 (61, 61,62)	16.68	16.64	18.42
75 to 99 (86, 84, 87)	15.81	15.25	17.16
100 to 149 (125, 121, 126)	15.70	15.25	17.07
150 to 199 (176, 167, 163)	15.16	15.10	17.60
200 to 299 (245, 241, 248)	14.29	14.19	15.54
300 to 399 (361, 343, 344)	13.88	14.03	15.83
400 to 599 (491, 481, 484)	14.30	14.05	14.43
600 or more (986, 957, 1016)	13.29	14.24	15.01

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Operating Costs of Production per CWT NY Business Summary

Farm Size (avg. cows)	1999	2000	2001
Less than 50 (40, 38, 39)	\$ 9.97	\$ 9.64	\$ 10.85
50 o 74 (61, 61,62)	10.42	10.42	11.64
75 to 99 (86, 84, 87)	10.62	10.53	11.70
100 to 149 (125, 121, 126)	11.26	10.49	12.25
150 to 199 (176, 167, 163)	11.36	10.50	12.47
200 to 299 (245, 241, 248)	11.16	10.84	11.96
300 to 399 (361, 343, 344)	11.33	11.08	12.50
400 to 599 (491, 481, 484)	11.66	11.23	11.75
600 or more (986, 957, 1016)	11.14	11.95	12.48

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Pounds of Milk per Cow NY Business Summary

Farm Size (avg. cows)	1999	2000	2001
Less than 50 (40, 38, 39)	16,588	16,600	16,585
50 o 74 (61, 61,62)	17,661	17,643	17,763
75 to 99 (86, 84, 87)	18,995	18,665	18,678
100 to 149 (125, 121, 126)	19,173	18,771	18,733
150 to 199 (176, 167, 163)	20,008	20,245	20,253
200 to 299 (245, 241, 248)	21,067	21,035	21,052
300 to 399 (361, 343, 344)	21,437	20,977	21,511
400 to 599 (491, 481, 484)	22,145	22,186	22,489
600 or more (986, 957, 1016)	23,517	23,158	23,033

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Total Costs of Production per CWT NY Business Summary

Pounds Milk Sold per Cow	1999	2000	2001
Under 16,000	\$ 17.59	\$ 17.11	\$ 19.14
16,000 – 16,999	16.80	15.50	18.20
17,000 – 17,999	15.70	15.53	16.74
18,000 – 18,999	15.97	15.13	16.07
19,000 – 19,999	14.76	15.31	16.25
20,000 – 20,999	14.62	15.55	15.56
21,000 – 21,999	14.61	14.52	15.25
22,000 – 22,999	13.80	13.75	15.59
23,000 & over	13.49	13.91	14.76

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Observations

- Relatively small changes in milk price or production costs have a dramatic impact on net farm earnings
- Dairy farm net earnings have fluctuated greatly in recent years
- Expanding herd size & increasing production per cow are responses to changes in milk prices
- Expenses per hundredweight rise in the long term, despite increases in production efficiency

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Observations

- With larger farm size, fixed costs per hundredweight drop but hired labor costs increase
- Cost of producing milk is closely correlated to output per cow
- Controlling key expenses and employing an appropriate level of technology improves farm profits

Additional Concerns

- Nationwide milk production continues to be strong
- Fluid milk consumption continues to wane
- New England and Northeast dairy market alternatives have decreased dramatically in the past 20 years
- Support services (infrastructure) for New England dairy farms are shrinking

Sources of Dairy Farm Financial Information

Northeast Dairy Farm Summary

First Pioneer Farm Credit, ACA &
Farm Credit of Western New York, ACA

Dairy Farm Management, Business Summary for NY State

Department of Applied Economics & Management
Cornell University