

Production costs for large dairies in 2012

Despite decent milk prices, average profit margin was less than 1 percent.

EVERY dairy is different. This statement can't be repeated too often – especially when the question is, "how much does it cost to make milk?"

While there can be great similarities between dairies of the same size, breed, housing type, age and location, there are no financial twins. That's why a precise answer to the "how much?" question is impossible. This was certainly true in 2012.

According to client income and cost data averages provided by Genske, Mulder & Co., the nation's largest dairy accounting firm, profitability among large and mostly western dairies varied significantly last year. There was some money to be made, but not everyone managed to do it.

In a nutshell, 2012 wasn't a good year. Most dairies did manage to stay alive, though, and given the huge challenges of recent years that continues to be no small achievement.

There's no question that big dairies were big businesses in 2012; average income per herd in the table below was \$12.31 million. Profits didn't come easily and they weren't big. The average per dairy

summarized below was just under \$109,000 – a virtual "why bother?" margin of 0.88 percent.

(Important note: This data almost certainly does not reflect the financial performance of U.S. dairies in general. The herds summarized milked an average of 2,466 cows and nearly all were located in the West, Southwest and Central Plains. By comparison, average U.S. herd size in 2012 was just 187 cows and 82 percent of all dairies were located in the Midwest and Northeast.)

Most and least profitable

Of the seven states and two regions summarized below, six are shown as having made a profit in 2012. Two of them were large and nearly identical (the Upper Midwest and Washington). Of the three that lost money, two were painfully large (New Mexico and California). But appearances are somewhat deceiving.

Actual losses were larger and profits were smaller because two important expense items were not included in the summary: Owner living costs and salary, and debt principal repayment. As a result,

only the Upper Midwest and Washington are likely to have made a profit in 2012.

Remember the good old days when \$2 per bushel corn meant feed costs could be counted upon to be about half of total income? In 2012, the past was still the present only in the Upper Midwest and Washington, which had the lowest feed costs of 48 percent and 52 percent, respectively. At the other end of the scale, the three states that lost money (Arizona, New Mexico and California) also had the highest feed costs of 71, 69 and 64 percent.

Clearly, the impact of feed costs on profitability is as strong as ever today and controlling them remains a top priority for milk producers.

Almost as strong was the relationship between total income per hundredweight and profitability. The four highest states in income ranked 1-4-6-3 in profitability, while the three states that lost money ranked 7-8-9 in income.

There was also a good correlation between milk production and profitability. The Upper Midwest, Washington and Colorado ranked 1-2-2 (tie) in production per cow and were 1-2-3 in overall prof-

2012 Dairy income and expenses

INCOME	Arizona		California		Colorado		Idaho		New Mexico	
	Total	Per cwt.	Total	Per cwt.	Total	Per cwt.	Total	Per cwt.	Total	Per cwt.
Milk	\$11,115,765	\$17.61	\$9,724,744	\$16.90	\$10,813,658	\$18.45	\$9,351,630	\$18.12	\$13,151,396	\$17.70
Milk futures	\$0	-	(\$10,135)	(\$0.02)	(\$21,333)	(\$0.03)	\$5,480	\$0.01	(\$71)	\$0.00
Calves and heifers	\$64,832	\$0.10	\$135,871	\$0.24	\$241,946	\$0.41	\$91,417	\$0.18	\$251,012	\$0.34
Patronage dividend	\$353,803	\$0.56	\$102,201	\$0.18	\$37,283	\$0.06	\$33,022	\$0.06	\$38,323	\$0.05
Other	\$43,337	\$0.07	\$284,760	\$0.49	\$169,870	\$0.29	\$54,468	\$0.11	\$55,877	\$0.07
Total income	\$11,577,737	\$18.34	\$10,237,441	\$17.79	\$11,241,424	\$19.16	\$9,536,017	\$18.48	\$13,496,537	\$18.16
EXPENSES										
Hay, silage and farming	\$3,804,533	\$6.03	\$3,354,827	\$5.83	\$3,330,289	\$5.68	\$3,061,888	\$5.93	\$4,694,766	\$6.32
Grain	\$5,249,667	\$8.32	\$4,659,889	\$8.10	\$4,307,969	\$7.35	\$3,892,511	\$7.54	\$6,487,142	\$8.73
Less cost of feeding heifers	(\$805,713)	(\$1.28)	(\$1,423,377)	(\$2.47)	(\$1,392,388)	(\$2.37)	(\$1,158,895)	(\$2.24)	(\$1,919,154)	(\$2.59)
Total feed cost	\$8,248,487	\$13.07	\$6,591,339	\$11.46	\$6,245,870	\$10.66	\$5,795,504	\$11.23	\$9,262,754	\$12.46
Herd Replacement Costs										
Depreciation – cows	\$570,949	\$0.90	\$584,010	\$1.02	\$559,176	\$0.95	\$497,784	\$0.97	\$772,444	\$1.04
Loss on sale of cows	\$3,647	\$0.01	\$201,825	\$0.35	\$58,201	\$0.10	\$284,888	\$0.55	\$176,035	\$0.24
Total replacement cost	\$574,596	\$0.91	\$785,835	\$1.37	\$617,377	\$1.05	\$782,672	\$1.52	\$948,479	\$1.28
Other Expenses										
Interest and rent	\$577,336	\$0.91	\$456,568	\$0.79	\$598,418	\$1.02	\$470,153	\$0.91	\$450,746	\$0.61
Equipment lease	\$0	-	\$2,231	\$0.00	\$39,371	\$0.07	\$17,327	\$0.03	\$9,106	\$0.01
Labor	\$818,686	\$1.30	\$705,289	\$1.22	\$984,374	\$1.68	\$586,517	\$1.14	\$1,173,415	\$1.58
Depreciation – other	\$156,561	\$0.25	\$261,587	\$0.45	\$379,717	\$0.65	\$292,554	\$0.57	\$347,366	\$0.47
Milk hauling	\$313,049	\$0.50	\$212,056	\$0.37	\$374,227	\$0.64	\$249,871	\$0.48	\$491,477	\$0.66
Industry assessments	\$244,184	\$0.39	\$107,470	\$0.19	\$186,839	\$0.32	\$109,358	\$0.21	\$152,005	\$0.20
Supplies	\$291,861	\$0.46	\$328,565	\$0.57	\$407,941	\$0.70	\$301,954	\$0.58	\$518,930	\$0.70
rBST	\$0	-	\$40,015	\$0.07	\$99,129	\$0.17	\$36,429	\$0.07	\$0	-
Manure mgmt. and environmental	\$6,314	\$0.01	\$52,441	\$0.09	\$20,364	\$0.03	\$10,680	\$0.02	\$66,212	\$0.09
Repairs and maintenance	\$266,997	\$0.42	\$288,437	\$0.50	\$253,033	\$0.43	\$251,304	\$0.49	\$365,803	\$0.49
Utilities	\$271,032	\$0.43	\$169,862	\$0.30	\$270,149	\$0.46	\$103,416	\$0.20	\$208,638	\$0.28
Taxes and licenses	\$76,203	\$0.12	\$118,809	\$0.21	\$104,206	\$0.18	\$85,197	\$0.17	\$158,174	\$0.21
Insurance	\$61,757	\$0.10	\$88,349	\$0.15	\$117,441	\$0.20	\$54,834	\$0.11	\$93,408	\$0.12
Fuel and oil	\$173,145	\$0.27	\$124,097	\$0.22	\$222,971	\$0.38	\$135,621	\$0.26	\$224,045	\$0.30
Professional fees	\$26,565	\$0.04	\$26,833	\$0.05	\$32,075	\$0.05	\$33,806	\$0.07	\$43,173	\$0.06
Employee benefits	\$11,803	\$0.02	\$58,298	\$0.10	\$36,782	\$0.06	\$9,944	\$0.02	\$36,490	\$0.05
Veterinary and breeding	\$69,660	\$0.11	\$128,498	\$0.22	\$289,164	\$0.49	\$179,464	\$0.35	\$230,098	\$0.31
Testing and trimming	\$40,555	\$0.06	\$46,767	\$0.08	\$39,290	\$0.07	\$48,932	\$0.09	\$51,565	\$0.07
Livestock hauling	\$4,777	\$0.01	\$9,510	\$0.02	\$5,562	\$0.01	\$8,135	\$0.02	\$16,168	\$0.02
Miscellaneous	\$3,592	\$0.01	\$12,209	\$0.02	\$13,546	\$0.02	\$9,223	\$0.02	\$6,497	\$0.01
Less cost of raising heifers	(\$258,248)	(\$0.41)	(\$272,399)	(\$0.47)	(\$304,665)	(\$0.52)	(\$152,212)	(\$0.30)	(\$404,973)	(\$0.54)
Total other expenses	\$3,155,829	\$5.00	\$2,965,492	\$5.15	\$4,169,934	\$7.11	\$2,842,507	\$5.51	\$4,238,343	\$5.70
Total expenses	\$11,978,912	\$18.98	\$10,342,666	\$17.98	\$11,033,181	\$18.82	\$9,420,683	\$18.26	\$14,449,576	\$19.44
TOTAL NET INCOME (loss)	(\$401,175)	(\$0.54)	(\$105,225)	(\$0.18)	\$208,243	\$0.36	\$115,334	\$0.22	(\$953,039)	(\$1.28)
Net income (loss) per cow	(\$149)		(\$41)		\$81		\$52		(\$264)	
Avg. number of milking cows	2,304		2,176		2,141		1,919		2,992	
Avg. daily production per cow	75 lbs.		72 lbs.		75 lbs.		73 lbs.		68 lbs.	
Avg. butterfat test	3.48%		3.68%		3.59%		3.67%		3.56%	
Avg. protein (or SNF) test	3.12%		3.87%		3.15%		3.17%		3.06%	
Herd turnover rate	32.2%		43.7%		41.7%		35.8%		37.6%	

All data provided by Genske, Mulder & Co., LLP Certified Public Accountants

itability. California, however, was also tied for second in milk production, yet it lost the second most money. New Mexico had the lowest average production and lost the most money, but Texas had the second lowest production and still made the fourth most money.

Biggest expenses

Feed is by far the biggest cost for all dairies, but the order of numbers two, three and four are beginning to blur. That it's happening says much about the cost change trends that are underway in the dairy industry.

For instance, replacements had been the number two cost for dairies everywhere almost forever. But in 2012 they were number three in Arizona, Colorado, New Mexico, the Upper Midwest and the lower Midwest. Labor (not including employee benefits) was the second biggest expense in all of them, and it came close in California and Texas. Interest and rent was number four everywhere.

Intuition says individual operating expense items should be similar among large dairies no matter where they are located. But in reality there were several huge and downright puzzling differences between states and areas. For instance:

Total feed cost averaged just \$9.74 per hundredweight of milk production in Washington, but \$13.07 in Arizona. That's a wow difference.

Replacement cost averaged 91 cents per hundredweight in Arizona, but \$1.52 in Idaho.

Labor averaged \$1.14 per hundredweight in Idaho, but \$2.04 in the Upper Midwest.

Milk hauling averaged a tiny 35 cents per hundredweight in the Upper Midwest, but a gigantic \$1.09 in Texas.

Depreciation was much less in Arizona – just 25 cents per hundredweight – than anywhere else. The Upper Midwest was highest at 83 cents.

Utilities averaged 20 cents per hundredweight in Idaho, but 46 cents in Colorado.

Supplies averaged 46 cents per hundredweight in Arizona, but 87 cents in the Upper Midwest.

Repairs and maintenance were similar everywhere except Washington, where they were roughly 50 percent higher.

Veterinary and breeding is a head-scratcher. Those costs averaged just 11 cents per hundredweight in Arizona, but 49 cents in Colorado and the Upper Midwest.

Industry assessments might be expected to be similar everywhere, yet they were not at all. They averaged 19 cents per hundredweight in California and the Upper Midwest, but 39 cents in Arizona.

rBST use has definitely not gone the way of the dinosaurs, but it did vary tremendously in 2012 – from zero in Arizona, New Mexico and Washington, to over \$100,000 in the Upper Midwest. **WEST**

The cost change story since 2006 is all about feed

EVERY milk producer who managed to survive from 2006 to 2012 endured a feed cost crisis unlike anything the industry had ever seen. Over 22,600 dairies – more than one-third of the nation's total – didn't make it, and feed costs were the big reason why.

There aren't any big surprises when comparing income and production costs from 2006 and 2012; most are about the same. What you

	2006	2012	Change
Income:			
Milk	\$12.30	\$18.27	48.5%
Calves and heifers	0.31	\$0.27	-12.9%
Patronage dividend	0.09	\$0.13	44.4%
Other	0.18	\$0.24	33.3%
Total income	\$12.90	\$18.89	46.4%
Feed:			
Hay and silage	\$3.83	\$5.81	51.7%
Grain	\$4.13	\$7.72	86.9%
Less cost of feeding heifers	(\$1.75)	(\$2.28)	30.3%
Total feed cost	\$6.21	\$11.25	81.2%
Replacements:			
Depreciation - cows	\$0.98	\$0.97	-1.0%
Loss on sale of cows	(\$0.56)	(\$0.30)	-46.4%
Total replacement cost	\$1.55	\$1.27	-18.1%
Other expenses:			
Interest and rent	\$1.03	\$0.80	-22.3%
Labor	\$1.35	\$1.44	6.7%
Depreciation - other	\$0.52	\$0.58	11.5%
Milk hauling	\$0.53	\$0.65	22.6%
Industry assessments	\$0.27	\$0.25	-7.4%
Supplies	\$0.61	\$0.63	3.3%
rBST	\$0.13	\$0.07	-46.2%
Corral cleaning	\$0.08	\$0.07	-12.5%
Repairs and maintenance	\$0.46	\$0.52	13.0%
Utilities	\$0.29	\$0.32	10.3%
Taxes and licenses	\$0.18	\$0.19	5.6%
Insurance	\$0.15	\$0.14	-6.7%
Fuel and oil	\$0.20	\$0.31	55.0%
Legal and accounting	\$0.05	\$0.06	20.0%
Employee benefits	\$0.06	\$0.05	-16.7%
Veterinary and breeding	\$0.30	\$0.34	13.3%
Testing and trimming	\$0.09	\$0.08	-11.1%
Livestock hauling	\$0.02	\$0.02	0.0%
Miscellaneous	\$0.02	\$0.02	0.0%
Total other expenses	\$5.98	\$6.19	3.5%
Total expenses	\$13.74	\$18.71	36.2%

know is drastically higher pretty much jumps off the page: grain, hay and silage costs. Fuel and fuel-related items are other higher costs that come as little surprise either.

Six years isn't very long, but during that period prices for grain, hay and forage started a cost of production frenzy that eventually exploded. Feed costs used to be annoying; now they can be fatal. They bore no resemblance in 2012 to what they had been in 2006. None whatsoever.

Total feed costs in 2012 were a staggering 81.2 percent (\$5.04 per hundredweight) higher. Yes, total income was \$5.99 per hundredweight higher, but keep in mind that 2006 was a disaster of a Class III price year that caused virtually everyone to lose money. In 2007 prices rose nearly \$6.

One of the good price item trends that we notice is a 22 percent drop in rent and interest. This is no doubt due to the combination of dairies paying down old debt, borrowing as little as possible, and prime interest rates that continue to be at historic lows. Replacement costs were also significantly less, most likely due to record high cull cow prices that dairies have enjoyed since 2009. **WEST**

Texas		Washington		Upper Midwest		Lower Midwest	
Total	Per cwt.	Total	Per cwt.	Total	Per cwt.	Total	Per cwt.
\$13,152,464	\$18.75	\$15,386,885	\$18.24	\$9,899,472	\$19.85	\$14,623,623	\$18.78
(\$14,328)	(\$0.02)	(\$15,443)	(\$0.02)	(\$50,649)	(\$0.10)	(\$22,036)	(\$0.03)
\$155,777	\$0.22	\$319,867	\$0.38	\$127,143	\$0.25	\$236,176	\$0.30
\$58,477	\$0.08	\$43,440	\$0.05	\$42,982	\$0.09	\$47,713	\$0.06
\$209,065	\$0.30	\$71,136	\$0.08	\$277,746	\$0.56	\$166,543	\$0.22
\$13,561,425	\$19.33	\$15,805,885	\$18.73	\$10,296,694	\$20.65	\$15,052,019	\$19.33
\$3,592,413	\$5.12	\$5,114,689	\$6.06	\$2,572,259	\$5.16	\$4,764,058	\$6.12
\$6,038,490	\$8.61	\$5,281,222	\$6.26	\$3,661,865	\$7.34	\$5,622,282	\$7.22
(\$1,678,792)	(\$2.39)	(\$2,179,621)	(\$2.58)	(\$1,288,129)	(\$2.58)	(\$1,544,982)	(\$1.98)
\$7,952,111	\$11.34	\$8,216,290	\$9.74	\$4,945,995	\$9.92	\$8,841,358	\$11.36
\$733,352	\$1.05	\$712,198	\$0.84	\$524,795	\$1.05	\$720,207	\$0.92
\$254,257	\$0.36	\$446,230	\$0.53	\$166,689	\$0.33	\$163,657	\$0.21
\$987,609	\$1.41	\$1,548,426	\$1.37	\$691,484	\$1.38	\$883,864	\$1.13
\$485,793	\$0.69	\$538,971	\$0.64	\$466,529	\$0.94	\$562,409	\$0.72
\$5,874	\$0.01	\$20,724	\$0.02	\$18,801	\$0.04	\$19,068	\$0.02
\$980,068	\$1.40	\$1,259,775	\$1.49	\$1,018,870	\$2.04	\$1,116,998	\$1.44
\$509,708	\$0.73	\$518,733	\$0.61	\$416,015	\$0.83	\$504,270	\$0.65
\$768,498	\$1.09	\$570,215	\$0.67	\$176,800	\$0.35	\$988,667	\$1.27
\$153,783	\$0.22	\$252,450	\$0.30	\$93,760	\$0.19	\$192,857	\$0.25
\$405,188	\$0.58	\$545,011	\$0.65	\$435,634	\$0.87	\$469,711	\$0.60
\$59,034	\$0.08	\$0	-	\$107,642	\$0.22	\$37,763	\$0.05
\$27,574	\$0.04	\$75,581	\$0.09	\$80,072	\$0.16	\$43,589	\$0.06
\$347,180	\$0.49	\$591,032	\$0.70	\$325,920	\$0.65	\$362,564	\$0.47
\$186,157	\$0.26	\$234,305	\$0.28	\$192,489	\$0.39	\$225,001	\$0.29
\$134,541	\$0.19	\$162,748	\$0.19	\$122,576	\$0.25	\$149,624	\$0.19
\$99,685	\$0.14	\$115,686	\$0.14	\$97,926	\$0.20	\$100,280	\$0.13
\$223,858	\$0.32	\$313,407	\$0.37	\$192,120	\$0.39	\$249,174	\$0.32
\$32,664	\$0.05	\$89,606	\$0.11	\$39,998	\$0.08	\$41,246	\$0.05
\$20,666	\$0.03	\$30,136	\$0.04	\$32,621	\$0.07	\$42,503	\$0.05
\$235,770	\$0.34	\$325,295	\$0.39	\$245,006	\$0.49	\$249,693	\$0.32
\$58,546	\$0.08	\$83,464	\$0.10	\$58,201	\$0.12	\$57,798	\$0.07
\$14,252	\$0.02	\$11,604	\$0.01	\$17,414	\$0.03	\$15,501	\$0.02
\$13,237	\$0.02	\$5,784	\$0.01	\$24,453	\$0.05	\$14,593	\$0.02
(\$381,389)	(\$0.54)	(\$462,076)	(\$0.55)	(\$170,458)	(\$0.34)	(\$175,527)	(\$0.22)
\$4,380,687	\$6.24	\$5,282,452	\$6.26	\$3,992,389	\$8.01	\$5,267,782	\$6.77
\$13,320,407	\$18.99	\$14,657,168	\$17.37	\$9,629,868	\$19.31	\$14,993,004	\$19.26
\$241,018	\$0.34	\$1,148,717	\$1.36	\$666,826	\$1.34	\$59,015	\$0.07
\$74		\$321		\$324		\$17	
2,781		3,083		1,795		3,006	
69 lbs.		75 lbs.		76 lbs.		71 lbs.	
3.63%		3.67%		3.70%		3.62%	
3.15%		3.17%		3.14%		3.13%	
41.2%		37.0%		46.3%		38.8%	