

Production Cost Study Highlights Jersey Opportunities

The all-time high farm milk prices of 2007 that fueled widespread profitability for dairy producers were also accompanied by increased input costs. As milk prices back away from those record peaks, but production costs remain high, where are the best opportunities for growing one's profit?

Drawing from the extensive cost information published annually by the California Department of Food and Agriculture (CDFA) and using pricing systems in widespread use, National All-Jersey Inc. has analyzed net income on an individual cow and hundredweight of milk produced basis to illustrate the differences between Jersey and Holstein profitability.

Documenting Costs

California is the only state in the U.S. that has an impartial agency that collects and reports comprehensive information on the production costs for milk. It has done this since 1955, and by law CDFA must consider these costs when setting minimum class prices.

For the *California Cost of Production 2007 Summary*, a seven-person Cost of Production Unit collected and summarized data from 166 Grade A dairy operations that cooperated voluntarily. These farms, with an average herd size of 1,148 cows, represent 8.5% of the state's 1,950 dairies, with just over 1.87 million total cows (958 per operation). Information on expenditures is collected on-site quarterly, from unaudited accrual basis financial statements.

Prior to 2006, CDFA produced a consolidated analysis of all surveyed herds, plus a report on "Jersey, mixed and other breed" herds. To better serve industry needs, Jersey-only and Holstein-only herd reports are now published and were used for this analysis.

The 2007 summary includes 16 Jersey herds (average, 1,306 cows) and 130 Holstein herds (1,194 cows). Average per cow investment by Jersey operations was \$2,892, and \$2,947 for Holsteins.

Production Per Cow

Jersey milk yield averaged 16,464 lbs. per cow, with average component levels of 4.67% fat, 3.52% true protein, and 9.24% nonfat solids (SNF).

Holstein yield was 22,392 lbs. per cow. Component levels were 3.62% milkfat, 3.06% protein and 8.78% SNF.

The Cheddar cheese yield per hundredweight for Jerseys was 12.34 lbs. per cwt., for average yield per cow of 2,032

duction costs for Jersey herds averaged \$2,595 versus \$3,091 per cow in Holstein herds, a difference of \$496 (19.1%). Jersey costs increased by 7% from 2006, while Holstein costs were higher by 13.6%.

Production costs were also expressed per hundredweight (cwt.) of milk produced (Table 2, this page).

For Jerseys, total cost of production was \$15.76 per cwt. Of this, \$8.87 was for feed, \$1.85 for labor, \$1.33 for replacement costs; \$3.25 in operating costs; and \$0.45 for milk marketing costs.

The average cost to produce a hundredweight of Holstein milk was \$13.80, or \$1.96 less per cwt. compared to Jersey milk. More than half of that total, \$1.14, was accounted for by the difference in feed costs.

As a percentage of the total, Jersey costs of production were distributed as 56.3% for feed, 11.8% for labor, 8.4% for total replacement costs, 20.6% other operating costs, and 2.9% for milk marketing. The distribution of costs for Holstein herds was 56.0% feed, 10.6% labor, 9.8% replacements, 19.9% other operating costs, and 3.6% for milk marketing.

Milk Value and Net Income Per Cow

Multiple component pricing. To provide a comparison for producers paid under multiple component pricing (MCP) programs, milk values for each breed were estimated using the 2007 average Federal Order minimum prices, per pound, of \$3.5121 for protein; \$1.4693 for milkfat; and for other solids, \$0.4201.

Jersey milk had an average value of \$22.58 per cwt., compared to \$19.42 for Holsteins, a difference of \$3.16 per cwt. (16.3%).

Revenue per cow using production levels in the CDFA survey was \$3,717 for Jerseys and \$4,348 for Holsteins, a difference of \$631 in gross income per cow. Subtracting production costs, net returns for Jerseys were \$1,121.75 per cow, and \$1,257.55 for Holsteins. The Holstein advantage was largely due to the producer price differen-

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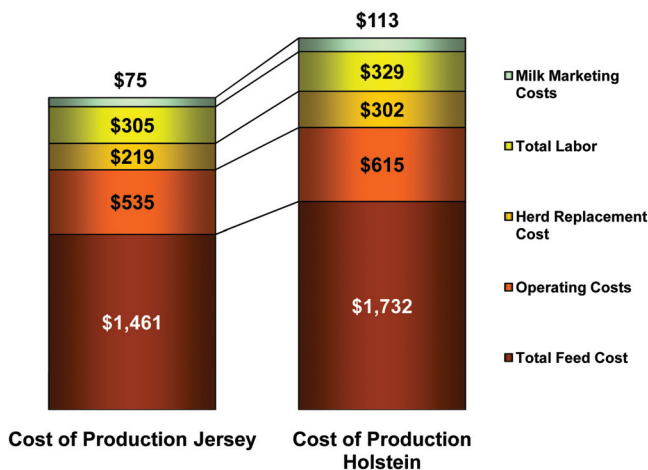


Fig. 1. Average annual production costs per cow for 2007, based on California Cost of Production Annual Summary data.

lbs. This compares to Holstein cheese yield per cwt. of 10.01 lbs., for total yield per cow of 2,242 lbs.

What It Cost To Produce

CDFA reports costs in five categories: (1) feed, (2) labor, (3) herd replacement, (4) operating, and (5) milk marketing costs (see Table 1, next page). In addition, CDFA considers the cost of management and a reasonable return on investment.

Figure 1 illustrates costs by category for each breed. On a per cow basis, 2007 pro-

Table 2. 2007 average cost of production per hundredweight milk, by breed.

Cost category	Jersey	Holstein	Diff.
Feed costs	\$ 8.87	\$ 7.73	\$ 1.14
Labor	1.85	1.47	.38
Herd Replacement	1.33	1.35	(.02)
Operating cost	3.25	2.75	.50
Milk marketing	.45	.50	(.05)
Total per cwt.	\$15.76	\$13.80	\$ 1.96

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tial, which averaged 95¢ per cwt. in 2007. Higher PPDs increase total revenue for Holsteins more than for Jerseys, because the PPD is paid on hundred-weights.

Cheese yield pricing. Milk values were also calculated using a formula based on the CME block Cheddar price (2007 average, \$1.7578 per lb.), less a make allowance indexed to product yield per hundredweight.

Jersey milk (12.34 lb. yield) was valued at \$19.91 per cwt., \$3.96 more than Holstein milk at \$15.95, based on average yield of 10.01 lbs. per cwt.

On a per cow basis, the annual value of Jersey milk was \$3,278 and \$3,571 for Holsteins. The difference in gross income was \$293 per cow, favoring Holsteins. However, net income for Jerseys was greater by \$202 per cow (\$682 vs. \$480).

Table 1. Average annual cost of production on per cow basis, 2006 and 2007.

Breed	2006			2007		
	Jersey	Holstein	Diff.	Jersey	Holstein	Diff.
Number of Herds	16	156		16	130	
Average Herd Size	1,008	1,057		1,306	1,194	
Average Yield per Cow						
Pounds Milk	16,032	21,852	(5,820)	16,464	22,392	(5,928)
Pounds Fat	752	795	(43)	769	811	(42)
Pounds True Protein	571	675	(104)	580	685	(105)
Production Costs per Cow						
Total Feed Cost	\$1,251	\$1,479	\$(228)	\$1,461	\$1,732	\$(271)
Total Labor	317	325	(8)	305	329	(24)
Total Herd Replacement Cost	242	232	10	219	302	(83)
Operating Costs	544	574	(30)	535	615	(80)
Total Milk Marketing Costs	73	110	(37)	75	113	(38)
Total Production Cost (\$ / cow / year)	\$2,427	\$2,720	\$(293)	\$2,595	\$3,091	\$(496)
Percent Change				7.0%	13.6%	

Data source: Cost of Production Summaries, California Department of Food & Agriculture (www.cdffa.ca.gov/dairy/dairy_cop_annual.html)

Net Income Per Cwt.

Due to the value of components, Jersey milk was worth more per cwt. than Holstein milk under both Federal Order MCP (\$22.58/cwt. versus \$19.42) and cheese yield pricing (\$19.91/cwt. versus \$15.95).

Taking total costs per cow. into account, net income under Federal Order MCP was

ing that producing more milk may not be the best way to keep ahead of cost increases. A more viable option may be to increase the value of milk and as this analysis shows, Jerseys provide that additional value.

For more information, contact National All-Jersey Inc. by phone, 614/861-3636, or email naj@usjersey.com.

Conclusions

Producers everywhere are experiencing increased production costs, and perhaps find-

Jersey Ranks First Among All Breeds For Productive Life In USDA Evaluations

After the August 2008 USDA genetic summaries, Jersey continues to be the leader for Productive Life among the six dairy breeds evaluated in the United States.

Data published by the USDA Animal Improvement Programs Laboratory (AIPL) show that for cows born over a five-year period—1997 through 2001—Jerseys have the longest average productive life of 33.8 months, or 1,031 days. A total of 196,724 Jerseys were included in the evaluation.

By comparison, the weighted average Productive Life for 3,265,113 cows of the other five breeds born in the same period is 27.7 months, or 844 days. By breeds, average PL for Ayrshires is 956 days (12,011 cows); Brown Swiss, 934 days (28,939 cows); Guernsey, 806 days (17,026 cows); Holstein, 843 days (3,204,339 cows); and Milking Shorthorn, 934 days (2,798 cows).

The trait of Productive Life (PL) is defined as “time in the milking herd before removal by voluntary culling, involuntary culling, or death.” Its evaluation combines

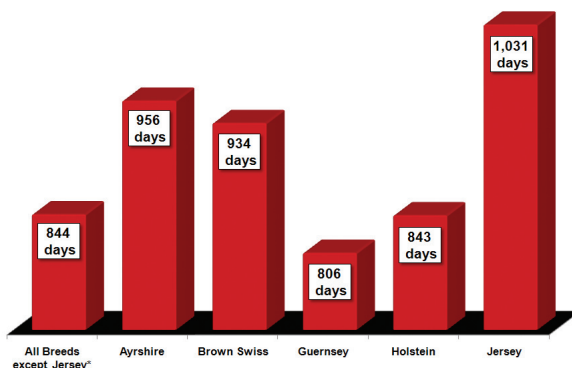


Fig. 1. Productive Life₀₆ of Jersey cows born in 1997-2001, in total days, compared to other breeds evaluated and also weighted average of all other breeds. Source: AIPL-USDA, August 2008. Calculations by AJCA.

information from direct longevity (measured by DHI data on calving dates, disposal dates, reasons for disposal and lactation lengths) with correlated traits.

Cows with multiple lactations get more

total credit than cows with just one long lactation. According to AIPL scientists, this is because “cows that begin a next lactation generally are more profitable than those that continue the previous lactation because a new peak yield is achieved.” As a cow's lactation is extended, the value credited to her production is diminished.

Cows having opportunity to reach eight (8) years of age are considered a completed observation, but continue to add credits for productive life after this point.

Productive Life is a key component of the USDA Net Merit functions. For Jerseys, it receives 18% of total emphasis for NMS and FMS, and 14% for CMS. In Jersey Performance Index™, Productive Life is weighted at 12%.

Reference: P. M. VanRaden, C. M. B. Dematawewa, R. E. Pearson, and M. E. Tooker, Productive Life Including All Lactations and Longer Lactations with Diminishing Credits. *Journal of Dairy Science* (2006) 89: 3213-3220.