

Jerseys vs. Holsteins: Cost Comparison Summary 2016 California Cost of Milk Production

Overview

Again in 2016, Jerseys excelled over Holsteins for income over feed costs per hundredweight according to data published by the California Department of Food and Agriculture (CDFA). However, the report also emphasized that last year was the second consecutive year of losses for typical California producers regardless of breed.

In late May, CDFA released their annual Cost of Milk Production report. The survey compiled by the staff of the Cost of Production Unit was based on data collected from 14 Jersey and 73 Holstein herds. Herds that volunteer to participate in the analysis provide CDFA personnel with herd financial records that are subject to audit-level scrutiny to assure their accuracy. Using the herd-reported mailbox milk prices and cost data, Jerseys posted income over feed costs of \$7.70/cwt., compared to Holsteins at \$5.77/cwt., for an advantage of \$1.93/cwt.

Revenue

2016 showed a drop of milk prices from the previous year. The California Mailbox prices shown in *Figure 1* are reported by the CDFA in conjunction with the cost of production summary and are based on California's regulated minimum prices plus earned premiums, less marketing costs and assessments. Milk component levels reported by the herds averaged 4.81% butterfat and 9.40% nonfat solids for Jerseys and 3.68% butterfat and 8.87% nonfat solids for Holsteins. The Jersey mailbox price of \$17.88/cwt. represented a \$0.41 drop from 2015.

The Holstein price of \$14.57/cwt. showed a \$0.59 drop from the previous year. Jersey production per day increased 1.5%, while Holstein production increased 1.3% per day.

As highlighted in *Figure 1*, the Jersey price advantage for the California Mailbox price is \$3.31/cwt. Cheese plant A and B represent California regulated prices plus quality and component premiums. The cheese plant prices illustrate the importance of specific protein premiums to Jersey milk. The Federal Order price represents FMMO minimums for fat, protein, and other solids plus an average producer price differential (PPD).

Cost Categories

Feed Costs

Overall feed costs decreased 11.9% from 2015. For 2016 dry roughage, wet feed and concentrates costs were noticeably lower than 2015. Overall feed costs for Jerseys decreased \$1.63/cwt. from 2015 while Holstein

costs went down \$1.26/cwt. Jersey total feed costs ran \$1.75/cwt. more than Holstein. Feed costs accounted for over 50% of total costs for both breeds.

Income over Feed Costs

Figure 1 also shows income over feed costs. For the California Mailbox price, Jerseys topped Holsteins by \$1.93/cwt. For

the California cheese plants, the Jersey difference was \$2.36/cwt for Plant A and \$2.27/cwt for Plant B. On the Federal Order Value, Jerseys surpassed Holsteins by \$2.34/cwt. Income over feed costs for 2016 increased 18.9% from 2015 for Jerseys, and 13.3% for Holsteins.

Figure 1 - Revenue and Income

<u>Revenue Per CWT</u>	<u>Jersey</u>	<u>Holstein</u>	<u>Jersey Difference</u>
California Mailbox	\$ 17.88	\$ 14.57	\$ 3.31
California Cheese Plant A	\$ 18.53	\$ 14.79	\$ 3.74
California Cheese Plant B	\$ 18.50	\$ 14.84	\$ 3.65
Federal Order Value	\$ 19.83	\$ 16.11	\$ 3.72
<u>IOFC Per CWT</u>	<u>Jersey</u>	<u>Holstein</u>	<u>Jersey Difference</u>
California Mailbox	\$ 7.70	\$ 5.77	\$ 1.93
California Cheese Plant A	\$ 8.35	\$ 5.99	\$ 2.36
California Cheese Plant B	\$ 8.32	\$ 6.04	\$ 2.27
Federal Order Value	\$ 9.65	\$ 7.31	\$ 2.34
<u>Net Income Per Cow</u>	<u>Jersey</u>	<u>Holstein</u>	<u>Jersey Difference</u>
California Mailbox	\$ (155.62)	\$ (148.40)	\$ (7.22)
California Cheese Plant A	\$ (141.19)	\$ (226.72)	\$ 85.53
California Cheese Plant B	\$ (147.86)	\$ (214.35)	\$ 66.48
Federal Order Value	\$ 108.05	\$ 97.82	\$ 10.23

2016 CA average prices: Fat \$2.2642, Overbase SNF \$.6783, Quota SNF \$0.8733

2016 FMMO average prices: Fat \$2.3084, Protein \$2.0955, Other Solids \$.091, PPD \$0.47

Hired Labor, Operating Costs & Milk Marketing

Hired labor expense for Jerseys went up five cents to \$2.03, while the Holstein cost stayed the same at \$1.67/cwt.

Operating costs, the broadest category, includes utilities, veterinary costs, bedding, fuel, taxes, insurance, depreciation and other items. For Jerseys, these costs increased 4.1% to \$3.82/cwt., while for Holsteins, these costs decreased by twelve cents to \$2.71/cwt. Hauling costs and assessments were virtually unchanged for both breeds.

Herd Replacement Costs

Of the five cost categories tracked by CDFA, replacement costs are the one most open to discussion. CDFA defines replacement costs as, “The number and value of cows entering the herd, minus the total receipts of cows culled and dead.” The effect of this accounting procedure is that herds raising their own replacement animals are ‘assessed’ the market value of those heifers when they enter the milking herd regardless of the actual costs to raise them. The demand for Jerseys is high in California, and the market value for Jersey and Holstein heifers is nearly equal. For 2016 CDFA valued Jersey replacements at \$1,761 and Holsteins at \$1,860.

Using CDFA’s methodology, replacement costs for Jerseys in 2016 were \$2.66/cwt., a decrease of \$0.25 from 2015 and \$0.66/cwt. greater than \$2.00/cwt. for Holsteins. On a per cow basis, the Jersey costs were \$512.76 while Holstein herds averaged \$494.76 per cow.

Total Cost Comparison

The total cost for Jerseys decreased \$1.70/cwt. in 2016 to \$19.26 and the total cost for Holsteins decreased \$1.41/cwt. to \$15.71.

California Herd Makeup

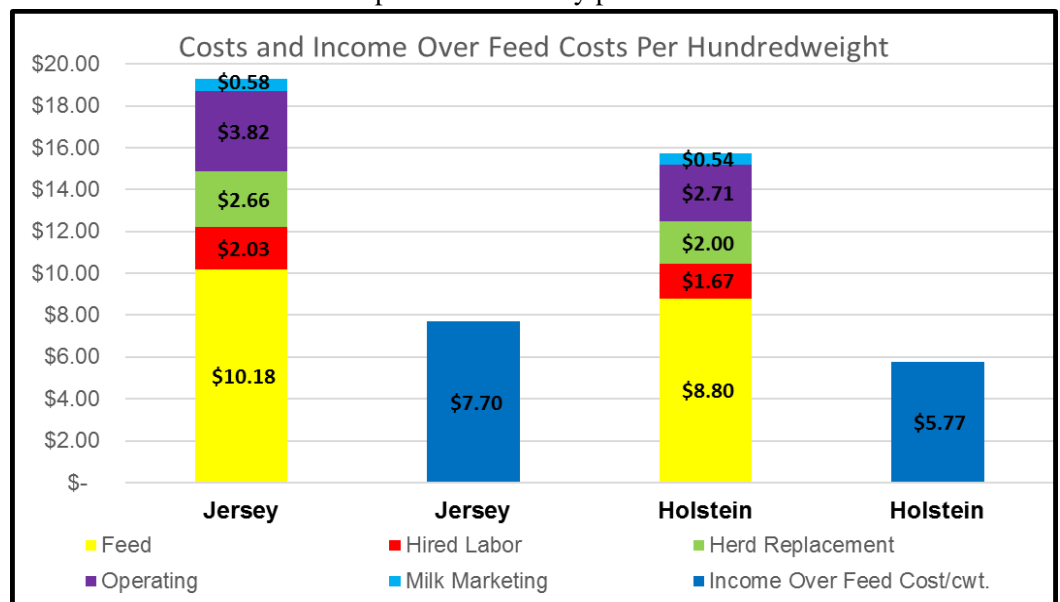
New to this year’s report was an analysis of the makeup of California’s milking herd. The chart at the top of the page shows how California producers are shifting to Jersey genetics. CDFA’s Milk Pooling Branch

Percent of Milk Production (Grade A & B)					
Herd Type	Sorting Parameters	December			
		2005	2014	2015	2016
Holstein	≤ 3.99%	91.2%	84.2%	78.5%	78.2%
Mixed & Other	> 3.99% and ≤ 4.30%	4.8%	5.5%	10.3%	10.2%
Jersey	> 4.30%	4.0%	10.3%	11.2%	11.6%
Total		100.0%	100.0%	100.0%	100.0%

receives butterfat test data from all the individual Grade A and Grade B dairies. These fat tests were used to estimate the volume of milk produced by Holsteins, Jerseys, and Mixed and Other breed herds. Mixed herds can be crossbreds or herds that milk both Jerseys and Holsteins in the same facility. As is shown, Jersey’s estimated percentage of California milk production has increased from 4.0% in 2005 to 11.6% last year, while Mixed and Other has increased from 4.8% to 10.2%. The strong interest in Jerseys has increased the value of Jerseys to the point they are nearly equal to that of Holsteins.

Summary

CDFA’s Cost of Production Summary reflected what many producers already knew, that while last year was a better year than 2015, dairy economics were still very tough. The comparisons between California pricing, including cheese plant protein premiums, and federal order pricing highlight why California producers initiated steps to replace their state milk order program with a FMMO. However, the California state order does not allow milk to be sold for less than the regulated minimum price, whereas manufacturing milk in the FMMOs can be sold for less Class price. Below Class sales are not reflected in the FMMO prices, but do lower prices received by producers.



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Milk & Component Outlook - 2017 Prices through April

2017 AVERAGE STATISTICAL BLEND PRICE FOR EACH FEDERAL ORDER		2017 MILK VOLUME (Million #)		2017 AVERAGE JERSEY REGULATED BLEND PRICE	
Northeast (Boston)	\$17.41	Northeast (Boston)	9,250	Northeast (Boston)	\$21.34
Appalachian (Charlotte)	\$19.39	Appalachian (Charlotte)	1,899	Appalachian (Charlotte)	\$22.74
Southeast (Atlanta)	\$19.18	Southeast (Atlanta)	1,946	Southeast (Atlanta)	\$22.20
Florida (Tampa)	\$21.18	Florida (Tampa)	901	Florida (Tampa)	\$24.40
Mideast (Cleveland)	\$16.55	Mideast (Cleveland)	7,050	Mideast (Cleveland)	\$20.45
Upper Midwest (Chicago)	\$16.26	Upper Midwest (Chicago)	10,810	Upper Midwest (Chicago)	\$20.34
Central (Kansas City)	\$16.40	Central (Kansas City)	5,452	Central (Kansas City)	\$20.40
Southwest (Dallas)	\$17.21	Southwest (Dallas)	4,643	Southwest (Dallas)	\$20.86
Arizona (Phoenix)	\$16.36	Arizona (Phoenix)	1,752	Arizona (Phoenix)	\$19.56
Pacific Northwest (Seattle)	\$16.18	Pacific Northwest (Seattle)	2,384	Pacific Northwest (Seattle)	\$19.51
ALL FMMO MARKET AVERAGE	\$17.61	ALL FMMO MARKET TOTAL	46,087	ALL FMMO MARKET AVERAGE	\$21.18
California 4b (Cheese Milk)	\$14.96			California 4b (Cheese Milk)	\$19.08
California Overbase	\$15.27			California Overbase	\$19.42

Prices reflect Federal Order minimum blend prices for city shown.

Total Grade A milk volume sold under FMMO.

Prices reflect FMMO minimum prices at Jersey component values.

2017 AVERAGE JERSEY BLEND WITH ESTIMATED PROTEIN OR CHEESE YIELD PREMIUMS		2017 AVERAGE DOLLAR DIFFERENCE: JERSEY MILK WITH PREMIUMS VS. STATISTICAL BLEND PRICE		2017 AVERAGE PERCENT DIFFERENCE: JERSEY MILK WITH PREMIUMS VS. STATISTICAL BLEND PRICE	
Northeast (Boston)	\$21.59	Northeast (Boston)	\$4.17	Northeast (Boston)	23.9%
Appalachian (Charlotte) (includes protein prem.)	\$23.10	Appalachian (Charlotte)	\$3.15	Appalachian (Charlotte)	15.8%
Southeast (Atlanta)	\$22.20	Southeast (Atlanta)	\$3.02	Southeast (Atlanta)	15.7%
Florida (Tampa)	\$24.40	Florida (Tampa)	\$3.23	Florida (Tampa)	15.3%
Mideast (Cleveland) (includes protein premium)	\$21.05	Mideast (Cleveland)	\$4.48	Mideast (Cleveland)	27.0%
Upper Midwest (Chicago) (includes cy premium)	\$20.58	Upper Midwest (Chicago)	\$4.24	Upper Midwest (Chicago)	25.9%
Central (Kansas City)	\$20.40	Central (Kansas City)	\$3.94	Central (Kansas City)	24.0%
Southwest (Dallas)	\$20.86	Southwest (Dallas)	\$3.65	Southwest (Dallas)	21.2%
Arizona (Phoenix) (includes protein)	\$19.90	Arizona (Phoenix)	\$3.54	Arizona (Phoenix)	21.7%
Pacific Northwest (Seattle)	\$19.51	Pacific Northwest (Seattle)	\$3.32	Pacific Northwest (Seattle)	20.5%
ALL FMMO MARKET AVERAGE	\$21.36	ALL FMMO MARKET AVERAGE	\$3.67	ALL FMMO MARKET AVERAGE	21.1%
California 4b (Includes CY Premium)	\$20.40	California 4b (Includes CY Premium)	\$5.44	California 4b (Includes CY Premium)	36.4%
California Overbase	\$20.74	California Overbase	\$5.47	California Overbase	35.8%

Includes a protein premium of \$0.05 for every 0.01% increase in protein over the market average.

Prices reflect difference between Jersey price with premiums, and the statistical blend price.

Percent difference in Jersey price with premiums, over the statistical blend price.

ESTIMATED JERSEY MILK COMPOSITION	2017	REGULATED MILK PRICES	2017	AVERAGE JERSEY PRICE ADJUSTMENT PER CWT:	2017
Butterfat	4.98	FMMO Milkfat	\$2.4313	FMMO Milkfat Adjustment	\$2.80
TRUE Protein	3.79	FMMO True Protein	\$1.9817	FMMO True Protein Adjustment	\$1.20
Other Solids	5.73	FMMO Other Solids	\$0.3047	FMMO Other Solids Adjustment	(\$0.01)
Solids Not Fat (SNF)	9.52	CA 4b (Cheese Milk) Milkfat	\$2.3466	CA 4b (Cheese Milk) Milkfat	\$3.48
Cheese Yield (90% Fat Recovery, 38% Moisture)	13.12	CA 4b (Cheese Milk) SNF	\$0.7758	CA 4b (Cheese Milk) SNF	\$0.65
		CA Overbase Milkfat	\$2.3463	CA Overbase Milkfat	\$3.48
		CA Overbase SNF	\$0.8115	CA Overbase SNF	\$0.67
CME Block Cheese Price	\$1.46				

NAJ Milk & Component Outlook - April 2017 Jersey Price Comparisons

<u>APR '17 STATISTICAL BLEND PRICE</u>		<u>APR '17 MONTHLY MILK VOLUME</u> (Million #)		<u>APR '17 JERSEY REGULATED BLEND PRICE</u>	
Northeast (Boston)	\$16.39	Northeast (Boston)	2,355	Northeast (Boston)	\$19.93
Appalachian (Charlotte)	\$19.34	Appalachian (Charlotte)	481	Appalachian (Charlotte)	\$22.13
Southeast (Atlanta)	\$17.97	Southeast (Atlanta)	502	Southeast (Atlanta)	\$20.88
Florida (Tampa)	\$20.08	Florida (Tampa)	220	Florida (Tampa)	\$23.10
Mideast (Cleveland)	\$15.61	Mideast (Cleveland)	1,843	Mideast (Cleveland)	\$19.16
Upper Midwest (Chicago)	\$15.37	Upper Midwest (Chicago)	3,080	Upper Midwest (Chicago)	\$18.93
Central (Kansas City)	\$15.42	Central (Kansas City)	1,461	Central (Kansas City)	\$18.96
Southwest (Dallas)	\$16.32	Southwest (Dallas)	1,211	Southwest (Dallas)	\$19.76
Arizona (Phoenix)	\$15.35	Arizona (Phoenix)	441	Arizona (Phoenix)	\$18.54
<u>Pacific Northwest (Seattle)</u>	<u>\$15.23</u>	<u>Pacific Northwest (Seattle)</u>	<u>610</u>	<u>Pacific Northwest (Seattle)</u>	<u>\$18.35</u>
ALL FMMO MARKET AVERAGE	\$17.45	ALL FMMO MARKET TOTAL	12,252	ALL FMMO MARKET AVERAGE	\$19.97
California 4b (Cheese Milk)	\$14.30			California 4b (Cheese Milk)	\$18.02
California Overbase	\$15.80			California Overbase	\$19.67

Prices reflect Federal Order minimum blend prices for city shown.

Total Grade A milk volume sold under FMMO during month.

Prices reflect FMMO minimum prices at Jersey component values.

<u>APR '17 JERSEY BLEND WITH ESTIMATED PROTEIN OR CHEESE YIELD PREMIUMS</u>		<u>APR '17 DOLLAR DIFFERENCE: JERSEY MILK WITH PREMIUMS VS. STATISTICAL BLEND PRICE</u>		<u>APR '17 PERCENT DIFFERENCE: JERSEY MILK WITH PREMIUMS VS. STATISTICAL BLEND PRICE</u>	
Northeast (Boston)	\$20.15	Northeast (Boston)	\$3.76	Northeast (Boston)	23.0%
Appalachian (Charlotte) (includes protein prem.)	\$22.47	Appalachian (Charlotte)	\$3.13	Appalachian (Charlotte)	16.2%
Southeast (Atlanta)	\$20.88	Southeast (Atlanta)	\$2.91	Southeast (Atlanta)	16.2%
Florida (Tampa)	\$23.10	Florida (Tampa)	\$3.02	Florida (Tampa)	15.0%
Mideast (Cleveland) (includes protein premium)	\$19.72	Mideast (Cleveland)	\$4.11	Mideast (Cleveland)	26.4%
Upper Midwest (Chicago) (includes cy premium)	\$19.16	Upper Midwest (Chicago)	\$3.79	Upper Midwest (Chicago)	24.6%
Central (Kansas City)	\$18.96	Central (Kansas City)	\$3.54	Central (Kansas City)	23.0%
Southwest (Dallas)	\$19.76	Southwest (Dallas)	\$3.44	Southwest (Dallas)	21.1%
Arizona (Phoenix) (includes protein)	\$18.86	Arizona (Phoenix)	\$3.51	Arizona (Phoenix)	22.9%
<u>Pacific Northwest (Seattle)</u>	<u>\$18.35</u>	<u>Pacific Northwest (Seattle)</u>	<u>\$3.12</u>	<u>Pacific Northwest (Seattle)</u>	<u>20.5%</u>
ALL FMMO MARKET AVERAGE	\$20.14	ALL FMMO MARKET AVERAGE	\$3.43	ALL FMMO MARKET AVERAGE	20.9%
California 4b (Includes CY Premium)	\$19.27	California 4b (Includes CY Premium)	\$4.97	California 4b (Includes CY Premium)	34.8%
California Overbase	\$20.93	California Overbase	\$5.12	California Overbase	32.4%

Includes a protein premium of \$0.05 for every 0.01% increase in protein over the market average.

Prices reflect difference between Jersey price with premiums, and the statistical blend price.

Percent difference in Jersey price with premiums, over the statistical blend price.

<u>ESTIMATED JERSEY MILK COMPOSITION</u>	<u>Apr-17</u>	<u>REGULATED MILK PRICES</u>	<u>Apr-17</u>	<u>AVERAGE JERSEY PRICE ADJUSTMENT PER CWT:</u>	<u>Apr-17</u>
Butterfat	4.89	FMMO Milkfat	\$ 2.3548	FMMO Milkfat Adjustment	\$2.66
TRUE Protein	3.74	FMMO True Protein	\$ 1.6955	FMMO True Protein Adjustment	\$1.01
Other Solids	5.73	FMMO Other Solids	\$ 0.3350	FMMO Other Solids Adjustment	(\$0.01)
Solids Not Fat (SNF)	9.47	CA 4b (Cheese Milk) Milkfat	\$ 2.2639	CA 4b (Cheese Milk) Milkfat	\$12.93
Cheese Yield (90% Fat Recovery, 38% Moisture)	12.96	CA 4b (Cheese Milk) SNF	\$ 0.7324	CA 4b (Cheese Milk) SNF	(\$2.30)
		CA Overbase Milkfat	\$ 2.2800	CA Overbase Milkfat	\$5.37
CME Block Cheese Price	\$ 1.73	CA Overbase SNF	\$ 0.8990	CA Overbase SNF	\$1.52