

Jerseys vs. Holsteins: Cost Comparison Summary 2017 California Cost of Milk Production

Overview

Again in 2017, Jerseys excelled over Holsteins for income over feed costs per hundredweight according to data published by the California Department of Food and Agriculture (CDFA). The report also showed that net income per cow improved during 2017, regardless of breed.

Early June, 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 16 Jersey and 71 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 \$9.79/cwt., compared to Holsteins at \$7.78/cwt., for an advantage of \$2.01/cwt.

Revenue

2017 showed an increase in 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 4.86% butterfat and 9.41% nonfat solids for Jerseys and 3.77% butterfat and 8.92% nonfat solids for Holsteins. The Jersey mailbox price of \$19.20/cwt. represented a \$1.72 jump from 2016. The Holstein price of \$16.21/cwt. showed a \$1.64 increase from the previous year. Milk

production per cow dropped for both Jersey and Holstein, 3% and 2.4% respectively.

Income over Feed Costs

As highlighted in *Figure 1*, the Jersey price advantage for the California Mailbox price is \$2.01/cwt. Cheese plant A and B represent California regulated prices plus quality and component premiums. For the California

cheese plants, the Jersey difference was \$2.54/cwt. for Plant A and \$2.04/cwt. for Plant B. The cheese plant prices illustrate the importance of specific protein premiums to Jersey milk. On the Federal Order Value, Jerseys surpassed Holsteins by \$2.39/cwt. The Federal Order price represents FMMO minimums for fat, protein, and other solids plus an average producer price differential (PPD).

Figure 1 - Revenue and Income				
Revenue Per CWT	Jersey	Holstein	Jersey Difference	
California Mailbox	\$ 19.60	\$ 16.21	\$ 3.39	
California Cheese Plant A	\$ 20.25	\$ 16.34	\$ 3.92	
California Cheese Plant B	\$ 19.80	\$ 16.39	\$ 3.42	
Federal Order Value	\$ 21.56	\$ 17.79	\$ 3.77	
IOFC Per CWT	Jersey	Holstein	Jersey Difference	
California Mailbox	\$ 9.79	\$ 7.78	\$ 2.01	
California Cheese Plant A	\$ 10.44	\$ 7.91	\$ 2.54	
California Cheese Plant B	\$ 9.99	\$ 7.96	\$ 2.04	
Federal Order Value	\$ 11.75	\$ 9.36	\$ 2.39	
2017 CA average prices: Fat \$2.5420, Overbase SNF \$0.7070, Quota SNF \$0.9020				
2017 FMMO average prices: Fat \$2.6143, Protein \$1.8682, Other Solids \$.2519, PPD \$0.50				

Cost Categories

Feed Costs

Overall feed costs decreased 4.9% from 2016. For 2017, dry roughage and wet roughage costs were just over 12% lower than 2016 values. Overall feed costs decreased \$0.37/cwt. for both Jerseys and Holsteins from 2016. Jersey total feed costs ran \$1.38/cwt. more than Holstein. Feed costs accounted for over 50% of total costs 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 \$1,670 and Holsteins at \$1,720.

Percent of Milk Production (Grade A & B)						
Herd Type	Sorting Parameters	December				
		2005	2014	2015	2016	2017
Holstein	≤ 3.99%	91.2%	84.2%	78.5%	78.2%	75.9%
Mixed & Other	> 3.99% and ≤ 4.30%	4.8%	5.5%	10.3%	10.2%	11.1%
Jersey	> 4.30%	4.0%	10.3%	11.2%	11.6%	13.0%
Total		100.0%	100.0%	100.0%	100.0%	100.0%

Using CDFA’s methodology, replacement costs for Jerseys in 2017 were \$2.24/cwt., a decrease of \$0.42 from 2016 and \$0.45/cwt. greater than \$1.79/cwt. for Holsteins. On a per cow basis, the Jersey costs were \$431.96 while Holstein herds averaged \$432.39 per cow.

Total Cost Comparison

The total cost for Jerseys decreased \$0.55/cwt. in 2017 to \$18.71/cwt. and the total cost for Holsteins decreased \$0.23/cwt. to \$15.48/cwt. Hired labor, operating cost and milk marketing costs contributed \$6.66/cwt. for Jerseys and \$5.26/cwt. for Holsteins to the total cost equation.

California Herd Makeup

The chart at the top of the page shows how California producers are continuing to shift to Jersey genetics. CDFA’s Milk Pooling Branch 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 crossbreeds 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 13% last year, while Mixed and Other has increased from 4.8% to 11.1%. In one year’s time the California Jersey herd grew 1.4%, roughly a 24,300 head increase.

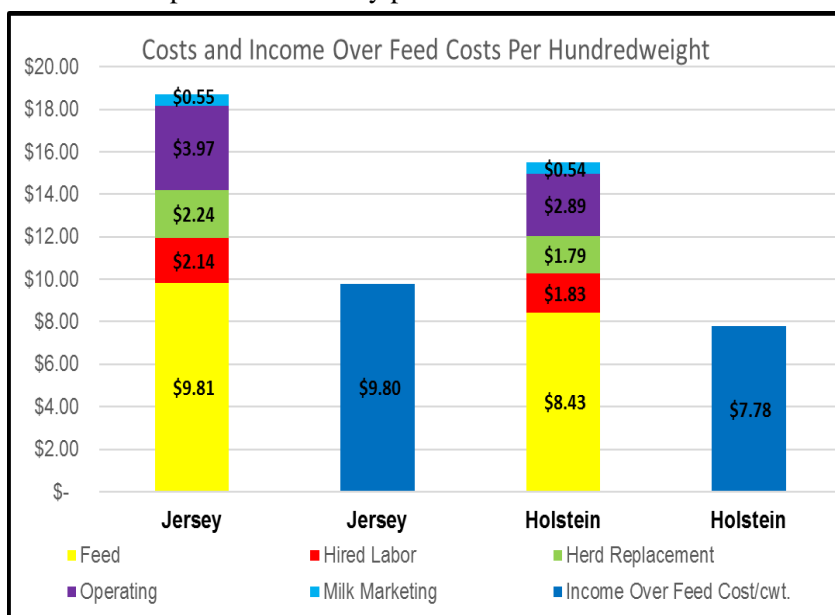
Federal Order Ruling

Earlier this month USDA announced that California producers approved replacing their state milk marketing order with a Federal Milk Marketing Order. The change will become effective with milk marketed in November 2018. This change in regulated milk pricing could lead to even faster growth of Jersey and Mixed herd milk in California for two reasons. First, FMMOs calculate prices for protein and other solids separately while CDFA combines their value into a solids-not-fat price. Over the past three years the CDFA SNF price averaged \$0.72/lb. compared to the FMMO protein price

of \$2.07. Without question the federal order protein price provides a stronger incentive to produce protein than the SNF price, and that’s an advantage for Jerseys. Second, California’s low Class I utilization and high Class IV utilization could lead to the FMMO having negative Producer Price Differentials (PPDs) on a regular basis. PPDs are paid strictly on a per hundredweight basis. Consistently negative PPDs will incentivize producers to maximize their milk components while minimizing milk volume. That will be another bonus for Jerseys.

Summary

CDFA’s Cost of Production Summary reflected what many producers already knew, that while last year was a better year than 2016, dairy economics were still very tough. The comparisons between California pricing, including cheese plant protein premiums, and federal order pricing highlight why California producers have chosen 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.



The NAJ Equity Newsletter is Published for Supporters of and People Interested In Equitable Milk Pricing

NAJ Milk & Component Outlook - 2018 Prices through April

2018 AVERAGE STATISTICAL BLEND PRICE FOR EACH FEDERAL ORDER		2018 MILK VOLUME (Million #)		2018 AVERAGE JERSEY REGULATED BLEND PRICE	
Northeast (Boston)	\$15.28	Northeast (Boston)	9,066	Northeast (Boston)	\$19.18
Appalachian (Charlotte)	\$16.62	Appalachian (Charlotte)	1,998	Appalachian (Charlotte)	\$20.10
Southeast (Atlanta)	\$16.94	Southeast (Atlanta)	1,888	Southeast (Atlanta)	\$20.44
Florida (Tampa)	\$18.78	Florida (Tampa)	885	Florida (Tampa)	\$22.14
Midwest (Cleveland)	\$14.44	Midwest (Cleveland)	6,598	Midwest (Cleveland)	\$17.89
Upper Midwest (Chicago)	\$14.15	Upper Midwest (Chicago)	11,014	Upper Midwest (Chicago)	\$17.84
Central (Kansas City)	\$14.13	Central (Kansas City)	5,577	Central (Kansas City)	\$17.82
Southwest (Dallas)	\$15.01	Southwest (Dallas)	4,344	Southwest (Dallas)	\$18.58
Arizona (Phoenix)	\$14.26	Arizona (Phoenix)	1,794	Arizona (Phoenix)	\$17.60
<u>Pacific Northwest (Seattle)</u>	<u>\$14.05</u>	<u>Pacific Northwest (Seattle)</u>	<u>2,678</u>	<u>Pacific Northwest (Seattle)</u>	<u>\$17.28</u>
ALL FMMO MARKET AVERAGE	\$15.37	ALL FMMO MARKET TOTAL	45,841	ALL FMMO MARKET AVERAGE	\$18.89
California 4b (Cheese Milk)	\$13.51			California 4b (Cheese Milk)	\$17.68
California Overbase	\$13.32			California Overbase	\$17.49

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.

2018 AVERAGE JERSEY BLEND WITH ESTIMATED PROTEIN OR CHEESE YIELD PREMIUMS		2018 AVERAGE DOLLAR DIFFERENCE: JERSEY MILK WITH PREMIUMS VS. STATISTICAL BLEND PRICE		2018 AVERAGE PERCENT DIFFERENCE: JERSEY MILK WITH PREMIUMS VS. STATISTICAL BLEND PRICE	
Northeast (Boston)	\$19.42	Northeast (Boston)	\$4.15	Northeast (Boston)	27.2%
Appalachian (Charlotte) (includes protein prem.)	\$20.46	Appalachian (Charlotte)	\$3.32	Appalachian (Charlotte)	19.4%
Southeast (Atlanta)	\$20.44	Southeast (Atlanta)	\$3.10	Southeast (Atlanta)	17.9%
Florida (Tampa)	\$22.14	Florida (Tampa)	\$3.37	Florida (Tampa)	18.0%
Midwest (Cleveland) (includes protein premium)	\$18.53	Midwest (Cleveland)	\$4.10	Midwest (Cleveland)	28.4%
Upper Midwest (Chicago) (includes cy premium)	\$18.09	Upper Midwest (Chicago)	\$3.93	Upper Midwest (Chicago)	27.8%
Central (Kansas City)	\$17.82	Central (Kansas City)	\$3.69	Central (Kansas City)	26.1%
Southwest (Dallas)	\$18.58	Southwest (Dallas)	\$3.59	Southwest (Dallas)	23.9%
Arizona (Phoenix) (includes protein)	\$17.95	Arizona (Phoenix)	\$3.71	Arizona (Phoenix)	26.0%
<u>Pacific Northwest (Seattle)</u>	<u>\$17.28</u>	<u>Pacific Northwest (Seattle)</u>	<u>\$3.24</u>	<u>Pacific Northwest (Seattle)</u>	<u>23.1%</u>
ALL FMMO MARKET AVERAGE	\$19.07	ALL FMMO MARKET AVERAGE	\$3.62	ALL FMMO MARKET AVERAGE	23.8%
California 4b (Includes CY Premium)	\$19.03	California 4b (Includes CY Premium)	\$5.52	California 4b (Includes CY Premium)	40.9%
California Overbase	\$18.84	California Overbase	\$5.52	California Overbase	41.4%

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.

ESTIMATED JERSEY MILK COMPOSITION		REGULATED MILK PRICES		AVERAGE JERSEY PRICE ADJUSTMENT PER CWT:	
	2018		2018		2018
Butterfat	5.05	FMMO Milkfat	\$2.4252	FMMO Milkfat Adjustment	\$2.82
TRUE Protein	3.81	FMMO True Protein	\$1.7188	FMMO True Protein Adjustment	\$1.04
Other Solids	5.73	FMMO Other Solids	\$0.0629	FMMO Other Solids Adjustment	(\$0.00)
Solids Not Fat (SNF)	9.54	CA 4b (Cheese Milk) Milkfat	\$2.3766	CA 4b (Cheese Milk) Milkfat	\$3.68
Cheese Yield (90% Fat Recovery, 38% Moisture)	13.17	CA 4b (Cheese Milk) SNF	\$0.5963	CA 4b (Cheese Milk) SNF	\$0.51
		CA Overbase Milkfat	\$2.3870	CA Overbase Milkfat	\$3.69
		CA Overbase SNF	\$0.5708	CA Overbase SNF	\$0.48

NAJ Milk & Component Outlook - April 2018 Jersey Price Comparisons

<u>APR '18 STATISTICAL BLEND PRICE</u>		<u>APR '18 MONTHLY MILK VOLUME</u> (Million #)		<u>APR '18 JERSEY REGULATED BLEND PRICE</u>	
Northeast (Boston)	\$15.46	Northeast (Boston)	2,295	Northeast (Boston)	\$19.39
Appalachian (Charlotte)	\$16.56	Appalachian (Charlotte)	495	Appalachian (Charlotte)	\$19.54
Southeast (Atlanta)	\$16.88	Southeast (Atlanta)	482	Southeast (Atlanta)	\$19.89
Florida (Tampa)	\$18.72	Florida (Tampa)	211	Florida (Tampa)	\$22.16
Midwest (Cleveland)	\$14.63	Midwest (Cleveland)	1,676	Midwest (Cleveland)	\$18.12
Upper Midwest (Chicago)	\$14.54	Upper Midwest (Chicago)	2,597	Upper Midwest (Chicago)	\$18.23
Central (Kansas City)	\$14.34	Central (Kansas City)	1,392	Central (Kansas City)	\$18.12
Southwest (Dallas)	\$15.24	Southwest (Dallas)	935	Southwest (Dallas)	\$18.86
Arizona (Phoenix)	\$14.50	Arizona (Phoenix)	442	Arizona (Phoenix)	\$17.92
<u>Pacific Northwest (Seattle)</u>	<u>\$14.32</u>	<u>Pacific Northwest (Seattle)</u>	<u>624</u>	<u>Pacific Northwest (Seattle)</u>	<u>\$17.79</u>
ALL FMMO MARKET AVERAGE	\$15.52	ALL FMMO MARKET TOTAL	11,149	ALL FMMO MARKET AVERAGE	\$19.00
California 4b (Cheese Milk)	\$14.27			California 4b (Cheese Milk)	\$18.48
California Overbase	\$13.66			California Overbase	\$17.80
<i>Prices reflect Federal Order minimum blend prices for city shown.</i>		<i>Total Grade A milk volume sold under FMMO during month.</i>		<i>Prices reflect FMMO minimum prices at Jersey component values.</i>	
<u>APR '18 JERSEY BLEND WITH ESTIMATED PROTEIN OR CHEESE YIELD PREMIUMS</u>		<u>APR '18 DOLLAR DIFFERENCE: JERSEY MILK WITH PREMIUMS VS. STATISTICAL BLEND PRICE</u>		<u>APR '18 PERCENT DIFFERENCE: JERSEY MILK WITH PREMIUMS VS. STATISTICAL BLEND PRICE</u>	
Northeast (Boston)	\$19.62	Northeast (Boston)	\$4.16	Northeast (Boston)	26.9%
Appalachian (Charlotte) (includes protein prem.)	\$19.88	Appalachian (Charlotte)	\$3.32	Appalachian (Charlotte)	20.0%
Southeast (Atlanta)	\$19.89	Southeast (Atlanta)	\$3.01	Southeast (Atlanta)	17.9%
Florida (Tampa)	\$22.16	Florida (Tampa)	\$3.44	Florida (Tampa)	18.4%
Midwest (Cleveland) (includes protein premium)	\$18.73	Midwest (Cleveland)	\$4.10	Midwest (Cleveland)	28.0%
Upper Midwest (Chicago) (includes cy premium)	\$18.48	Upper Midwest (Chicago)	\$3.94	Upper Midwest (Chicago)	27.1%
Central (Kansas City)	\$18.12	Central (Kansas City)	\$3.78	Central (Kansas City)	26.4%
Southwest (Dallas)	\$18.86	Southwest (Dallas)	\$3.62	Southwest (Dallas)	23.8%
Arizona (Phoenix) (includes protein)	\$18.26	Arizona (Phoenix)	\$3.76	Arizona (Phoenix)	25.9%
<u>Pacific Northwest (Seattle)</u>	<u>\$17.79</u>	<u>Pacific Northwest (Seattle)</u>	<u>\$3.47</u>	<u>Pacific Northwest (Seattle)</u>	<u>24.3%</u>
ALL FMMO MARKET AVERAGE	\$19.18	ALL FMMO MARKET AVERAGE	\$3.66	ALL FMMO MARKET AVERAGE	23.9%
California 4b (Includes CY Premium)	\$19.76	California 4b (Includes CY Premium)	\$5.49	California 4b (Includes CY Premium)	38.5%
California Overbase	\$19.09	California Overbase	\$5.43	California Overbase	39.7%
<i>Includes a protein premium of \$0.05 for every 0.01% increase in protein over the market average.</i>		<i>Prices reflect difference between Jersey price with premiums, and the statistical blend price.</i>		<i>Percent difference in Jersey price with premiums, over the statistical blend price.</i>	
<u>ESTIMATED JERSEY MILK COMPOSITION</u>		<u>REGULATED MILK PRICES</u>		<u>AVERAGE JERSEY PRICE ADJUSTMENT PER CWT:</u>	
	Apr-18		Apr-18		Apr-18
Butterfat	4.99	FMMO Milkfat	\$ 2.5113	FMMO Milkfat Adjustment	\$2.89
TRUE Protein	3.77	FMMO True Protein	\$ 1.7810	FMMO True Protein Adjustment	\$1.07
Other Solids	5.73	FMMO Other Solids	\$ 0.0619	FMMO Other Solids Adjustment	(\$0.00)
Solids Not Fat (SNF)	9.50	CA 4b (Cheese Milk) Milkfat	\$ 2.4868	CA 4b (Cheese Milk) Milkfat	\$3.70
Cheese Yield (90% Fat Recovery, 38% Moisture)	13.04	CA 4b (Cheese Milk) SNF	\$ 0.6399	CA 4b (Cheese Milk) SNF	\$0.52
		CA Overbase Milkfat	\$ 2.4770	CA Overbase Milkfat	\$3.68
CME Block Cheese Price	\$ 1.61	CA Overbase SNF	\$ 0.5740	CA Overbase SNF	\$0.46