



January 30, 2018

TO ALL INTERESTED PARTIES:

This report represents the latest nonfat dry milk (NFDM), bulk butter, and Cheddar cheese Manufacturing Cost Exhibit for the period of January through December 2016. As was discussed in the past, the cost exhibit for Cheddar cheese has limitations due to the concentration issues and confidentiality of proprietary information. In addition, these same confidentiality limitations will prohibit the Department from being able to release the Comparison of the Chicago Mercantile Exchange Cheddar Cheese Prices and the Audited California Cheddar Cheese Sales data.

About the Cost Exhibit:

- The processing cost data does not include the cost of raw product nor does it include any cost of marketing finished product.
- The cost data for nonfat dry milk and bulk butter are presented in a table that shows actual weighted-average cost of plants grouped by efficiency.
- The cost data for Cheddar cheese is presented in a table as one group to protect confidentiality.
- The summary table shows the weighted-average manufacturing cost for nonfat dry milk, bulk butter, and Cheddar cheese as published since January 2007.

In addition, included in this cost exhibit is a comparative analysis of common line item costs. Costs include: packaging; processing labor; processing non-labor; general and administrative cost; return on investment; and for butter and Cheddar cheese, other miscellaneous ingredients.

We continue to appreciate the assistance of those plants that are providing the Manufacturing Cost Unit with data to complete the studies.

Should you have any questions regarding this material, please contact me at the telephone number below or by e-mail at leticia.regalado@cdfa.ca.gov.

Sincerely,

Leticia Regalado
Supervising Auditor I



**Summary of Weighted Average Manufacturing Costs
Butter, Nonfat Dry Milk, and Cheddar Cheese**

Costs include processing labor, processing non-labor, packaging, misc. ingredients (for butter and Cheddar cheese only), general and administrative, and return on investments at 4.718% for 2016.

Study Period	Release Date	BUTTER		NONFAT DRY MILK		CHEDDAR CHEESE	
		Cost Per Pound	Number of Plants	Cost Per Pound	Number of Plants	Cost Per Pound	Number of Plants
Jan-Dec 2007	Sep-08	\$0.1316	7	\$0.1568	8	\$0.2003	6
Jan-Dec 2008	Oct-09	\$0.1553	8	\$0.1931	9	\$0.2099	6
Jan-Dec 2009	Nov-10	\$0.1811	8	\$0.1984	9	\$0.1966	6
Jan-Dec 2010	Oct-11	\$0.1781	8	\$0.2070	9	\$0.1921	6
Jan-Dec 2011	Nov-12	\$0.1775	8	\$0.1942	9	\$0.2029	4
Jan-Dec 2012	Nov-13	\$0.1688	7	\$0.1999	9	\$0.2171	4
Jan-Dec 2013	Nov-14	\$0.1724	7	\$0.1997	9	\$0.2291	4
Jan-Dec 2014	Dec-15	\$0.1843	7	\$0.2011	9	\$0.2355	4
Jan-Dec 2015	Jan-17	\$0.1842	7	\$0.2078	9	\$0.2394	4
Jan-Dec 2016	Jan-18	\$0.1938	7	\$0.2082	8	\$0.2454	4

Notes:

Since 1996, the Cheddar cheese cost studies have included costs associated with Cheddar cheese plants producing 500-pound barrels and 640-pound blocks. However, costs for packaging labor and packaging expenses were replaced with the average of those costs associated with 40-pound block plants.

BUTTER MANUFACTURING COSTS

CURRENT Study Period: January through December 2016
With Comparison to the same time period Prior Year (2015)

- Manufacturing cost data were collected and summarized from seven California butter plants. The seven plants processed 559.41 million pounds of butter during the 12-month study period, January through December 2016, representing 99.35% of the butter processed in California.
- The volume total includes both bulk butter and cut butter, but the costs reflect only costs for bulk butter (25 kg and 68 lb. blocks).
- To obtain the weighted average, individual plant costs were weighted by their butter processing volume relative to the total volume of butter processed by all plants included in this cost study.

Breakdown of Butter Manufacturing Costs - January through December 2016

Categories	Low Cost Group	High Cost Group	Range of Costs		CURRENT Weighted Average Cost All Plants Jan-Dec 2016	PRIOR YEAR Weighted Average Cost All Plants Jan-Dec 2015	Actual Difference Current Less Prior Year
			Minimum	Maximum			
<i>Dollars Per Pound of Butter</i>							
Number of Plants	3	4	7	7	7	7	0
Processing Labor	\$0.0656	\$0.0966	\$0.0451	\$0.1301	\$0.0754	\$0.0692	\$0.0062
Processing Non-Labor	\$0.0726	\$0.0718	\$0.0633	\$0.1946	\$0.0724	\$0.0705	\$0.0019
Packaging	\$0.0121	\$0.0144	\$0.0114	\$0.0147	\$0.0128	\$0.0130	-\$0.0002
Misc. Ingredients	\$0.0037	\$0.0039	\$0.0034	\$0.0044	\$0.0038	\$0.0034	\$0.0004
General & Administrative	\$0.0175	\$0.0230	\$0.0142	\$0.0260	\$0.0193	\$0.0179	\$0.0014
Return on Investment	\$0.0123	\$0.0052	\$0.0034	\$0.0204	\$0.0101	\$0.0102	-\$0.0001
Average Total Cost	\$0.1838	\$0.2149	--	--	\$0.1938	\$0.1842	\$0.0096
Volume in Group (Lbs.)	382,442,483	176,970,985	--	--	559,413,468	575,438,032	-16,024,564
% Volume by Group	68.4%	31.6%	--	--	100.0%	100.0%	--

Processing Labor: Labor costs associated with processing of product, including wages, payroll taxes and fringe benefits.

Processing Non-Labor: Includes costs such as utilities, repairs and maintenance, laundry, supplies, depreciation, plant insurance, and rent.

Packaging: Includes all non-reusable items used in the packaging of the product, such as boxes, bags, cartons, liners, tape, glue, and stretch wrap.

Misc. Ingredients: Includes salt.

General & Administrative: Includes expenses in the management of the company, such as office supplies, short-term interest, dues and subscriptions, accounting fees, headquarter charges, office clerical wages and executive salaries.

Return on Investment: Calculated by subtracting accumulated depreciation from the original cost of assets, with the remaining book value multiplied by Moody's "BAA" corporate bond index.

	2015 WEIGHTED AVERAGE COSTS	2016 WEIGHTED AVERAGE COSTS	% CHANGE
All Butter Pounds	575,438,032	559,413,468	-2.78%
Bulk Butter Pounds	173,528,835	141,655,474	-18.37%
SUMMARY OF COSTS			
Misc. Ingredient Costs	0.0034	0.0038	11.76%
Packaging Expense	0.0130	0.0128	-1.54%
Processing Labor	0.0692	0.0754	8.96%
Processing Non-Labor	0.0705	0.0724	2.70%
Gen & Admin Expenses	0.0179	0.0193	7.82%
Return On Investment	0.0102	0.0101	-0.98%
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Manufact Costs - per Lb.	0.1842	0.1938	5.21%
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SELECTED EXPENSES PER LB.			
Natural Gas & Fuel Oil	0.0021	0.0021	0.00%
Electricity	0.0097	0.0084	-13.40%
Sewer, Water, Garbage	0.0047	0.0044	-6.38%
Depreciation	0.0168	0.0186	10.71%
Property Taxes	0.0026	0.0030	15.38%
Insurance	0.0021	0.0022	4.76%
Repairs & Maintenance	0.0088	0.0098	11.36%
Plant Supplies	0.0160	0.0160	0.00%
Rent-Plant & Equip	0.0007	0.0007	0.00%
Outside Testing & Grading	0.0041	0.0062	51.22%
Gen & Admin Payroll	0.0072	0.0085	18.06%
Short-Term Interest	0.0037	0.0000	- -
Professional Services	0.0008	0.0009	12.50%
Headquarter Expenses	0.0017	0.0045	164.71%
Other Misc. Expenses	0.0074	0.0064	-13.51%
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Total Non-Labor & G&A Exps	0.0884	0.0917	3.73%
MISC. INFORMATION			
Payroll per Employee-Plant	\$86,002	\$86,168	0.19%
Total Book Value of Assets	\$7,808,092	\$6,537,850	-16.27%
Book Value of Assets per Lb.	0.2030	0.2131	4.98%

NONFAT DRY MILK MANUFACTURING COSTS

CURRENT Study Period: January through December 2016
With Comparison to the same time period Prior Year (2015)

- Manufacturing cost data were collected and summarized from eight California NFDM plants. The eight plants processed 555.02 million pounds of NFDM during the 12-month study period, January through December 2016, representing 97.44% of the NFDM processed in California.
- The volume includes NFDM, both animal and human consumption. NFDM for human consumption represented 99.64% of the 555.02 million pounds of NFDM processed, and NFDM for animal consumption represented 0.36%.
- The volume total includes all grades of NFDM packaged in any container size, but the costs reflect only costs for 25 kg and 50 lb. bags of NFDM.
- To obtain the weighted average, individual plant costs were weighted by their NFDM processing volume relative to the total volume of NFDM processed by all plants included in the cost study.

Breakdown of Nonfat Dry Milk Manufacturing Costs - January through December 2016

Categories	Low Cost Group	High Cost Group	Range of Costs		CURRENT Weighted Average Cost All Plants Jan-Dec 2016	PRIOR YEAR Weighted Average Cost All Plants Jan-Dec 2015	Actual Difference Current Less Prior Year
			Minimum	Maximum			
<i>Dollars Per Pound of NFDM</i>							
Number of Plants	4	4	8	8	8	9	-1
Processing Labor	\$0.0452	\$0.0803	\$0.0339	\$0.1939	\$0.0538	\$0.0523	\$0.0015
Processing Non-Labor	\$0.1004	\$0.1513	\$0.0858	\$0.2082	\$0.1129	\$0.1138	-\$0.0009
Packaging	\$0.0154	\$0.0148	\$0.0144	\$0.0164	\$0.0152	\$0.0152	\$0.0000
General & Administrative	\$0.0131	\$0.0166	\$0.0101	\$0.0362	\$0.0140	\$0.0133	\$0.0007
Return on Investment	\$0.0113	\$0.0156	\$0.0057	\$0.0213	\$0.0123	\$0.0132	-\$0.0009
Average Total Cost	\$0.1854	\$0.2786	--	--	\$0.2082	\$0.2078	\$0.0004
Volume in Group (Lbs.)	418,880,396	136,140,071	--	--	555,020,467	687,122,384	-132,101,917
% Volume by Group	75.5%	24.5%	--	--	100.0%	100.0%	--

Processing Labor: Labor costs associated with processing of product, including wages, payroll taxes and fringe benefits.

Processing Non-Labor: Includes costs such as utilities, repairs and maintenance, laundry, supplies, depreciation, plant insurance, and rent.

Packaging: Includes all non-reusable items used in the packaging of the product, such as boxes, bags, cartons, liners, tape, glue and stretch wrap.

General & Administrative: Includes expenses in the management of the company, such as office supplies, short-term interest, dues and subscriptions, accounting fees, headquarter charges, office clerical wages and executive salaries.

Return on Investment: Calculated by subtracting accumulated depreciation from the original cost of assets, with the remaining book value multiplied by Moody's "BAA" corporate bond index.

	2015 WEIGHTED AVERAGE COSTS	2016 WEIGHTED AVERAGE COSTS	% CHANGE
NFDM Powder Pounds	687,122,384	555,020,467	-19.23%

SUMMARY OF COSTS

Packaging Expense	0.0152	0.0152	0.00%
Processing Labor	0.0523	0.0538	2.87%
Processing Non-Labor	0.1138	0.1129	-0.79%
Gen & Admin Expenses	0.0133	0.0140	5.26%
Return On Investment	0.0132	0.0123	-6.82%
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Manufact Costs - per Lb.	0.2078	0.2082	0.19%

SELECTED EXPENSES PER LB.

Natural Gas & Fuel Oil	0.0207	0.0201	-2.90%
Electricity	0.0169	0.0155	-8.28%
Sewer,Water,Garbage	0.0074	0.0074	0.00%
Depreciation	0.0195	0.0197	1.03%
Property Taxes	0.0031	0.0033	6.45%
Insurance	0.0016	0.0013	-18.75%
Repairs & Maintenance	0.0116	0.0127	9.48%
Plant Supplies	0.0213	0.0233	9.39%
Rent-Plant & Equip	0.0010	0.0018	80.00%
Outside Testing & Grading	0.0078	0.0071	-8.97%
Gen & Admin Payroll	0.0056	0.0062	10.71%
Short-Term Interest	0.0033	0.0000	- -
Professional Services	0.0003	0.0005	66.67%
Headquarter Expenses	0.0019	0.0040	110.53%
Other Misc.Expenses	0.0051	0.0040	-21.57%
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Total Non-Labor & G&A Exps	0.1271	0.1269	-0.16%

MISC. INFORMATION

Payroll per Employee-Plant	\$88,096	\$89,178	1.23%
Total Book Value of Assets	\$55,119,942	\$51,364,528	-6.81%
Book Value of Assets per Lb.	0.2629	0.2611	-0.68%

CHEESE MANUFACTURING COSTS

CURRENT Study Period: January through December 2016
With Comparison to the same time period Prior Year (2015)

- Manufacturing cost data were collected and summarized from four California cheese plants. Due to confidential reasons, total cheese volumes cannot be displayed.
- The volume total includes both Cheddar and Monterey Jack cheeses, but the costs reflect only costs for 40-lb. blocks of Cheddar.
- Two plants processed 500-lb. barrels or 640-lb. blocks. Packaging costs and packaging labor for 40-lb. blocks were substituted for these plants.
- To obtain the weighted average, individual plant costs were weighted by their cheese processing volume relative to the total volume of cheese processed by all plants included in the cost study.
- For all cheese: the weighted average yield was 13.18 lbs. of cheese per hundredweight of milk. The weighted average moisture was 37.43% and the weighted average vat tests were 4.67% fat and 9.68% SNF.

Breakdown of Cheese Manufacturing Costs - January through December 2016

Categories	CURRENT Weighted Average Cost All Plants Jan-Dec 2016	PRIOR YEAR Weighted Average Cost All Plants Jan-Dec 2015	Actual Difference Current Less Prior Year
<i>Dollars Per Pound of Cheese</i>			
Number of Plants	4	4	0
Processing Labor	\$0.0626	\$0.0640	-\$0.0014
Processing Non-Labor	\$0.0882	\$0.0862	\$0.0020
Packaging	\$0.0244	\$0.0239	\$0.0005
Misc. Ingredients	\$0.0286	\$0.0251	\$0.0035
General & Administrative	\$0.0355	\$0.0342	\$0.0013
Return on Investment	\$0.0061	\$0.0060	\$0.0001
Average Total Cost	\$0.2454	\$0.2394	\$0.0060

Processing Labor: Labor costs associated with processing of product, including wages, payroll taxes and fringe benefits.

Processing Non-Labor: Includes costs such as utilities, repairs and maintenance, laundry, supplies, depreciation, plant insurance, and rent.

Packaging: Includes all non-reusable items used in the packaging of the product, such as boxes, bags, cartons, liners, tape, glue and stretch wrap.

Misc. Ingredients: Includes salt, color, and rennet.

General & Administrative: Includes expenses in the management of the company, such as office supplies, short-term interest, dues and subscriptions, accounting fees, headquarter charges, office clerical wages and executive salaries.

Return on Investment: Calculated by subtracting accumulated depreciation from the original cost of assets, with the remaining book value multiplied by Moody's "BAA" corporate bond index.

	2015 WEIGHTED AVERAGE COSTS	2016 WEIGHTED AVERAGE COSTS	% CHANGE
Cheddar Cheese Pounds			
SUMMARY OF COSTS			
Misc. Ingredient Costs	0.0251	0.0286	13.94%
Packaging Expense	0.0239	0.0244	2.09%
Processing Labor	0.0640	0.0626	-2.19%
Processing Non-Labor	0.0862	0.0882	2.32%
Gen & Admin Expenses	0.0342	0.0355	3.80%
Return On Investment	0.0060	0.0061	1.67%
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Manufact Costs - per Lb.	0.2394	0.2454	2.51%

SELECTED EXPENSES PER LB.

Natural Gas & Fuel Oil	0.0050	0.0049	-2.00%
Electricity	0.0069	0.0076	10.14%
Sewer & Whey Disposal	0.0035	0.0038	8.57%
Depreciation	0.0116	0.0128	10.34%
Property Taxes	0.0019	0.0024	26.32%
Insurance	0.0021	0.0016	-23.81%
Repairs & Maintenance	0.0195	0.0247	26.67%
Plant Supplies	0.0163	0.0133	-18.40%
Rent - Plant & Equipment	0.0146	0.0145	-0.68%
Outside Testing & Grading	0.0017	0.0017	0.00%
Gen & Admin Payroll	0.0208	0.0212	1.92%
Short-Term Interest	0.0006	0.0003	-50.00%
Professional Services	0.0059	0.0066	11.86%
Headquarter Expenses	0.0026	0.0000	- -
Other Misc. Expenses	0.0074	0.0083	12.16%
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Total Non-Labor & G&A Exps	0.1204	0.1237	2.74%

MISC. INFORMATION

Payroll per Employee-Plant	\$67,855	\$66,700	-1.70%
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FINISHED MOISTURE	37.04	37.43	1.05%
VAT FAT	4.73	4.67	-1.27%
VAT SNF	9.62	9.68	0.62%
VAT YIELD	13.31	13.18	-0.98%