

The Impact of Depooling

The two overriding issues in the dairy industry since the beginning of March have been extreme price volatility, and the unprecedented impact it has had on announced Federal Milk Marketing Order (FMMO) prices. This year's dairy commodity price volatility is linked to rapid supply and demand changes resulting from the COVID-19 outbreak. Following the collapse of demand from the food service industry, CME cheese prices cratered to be barely above \$1.00 per pound in April. Then a surge in export orders combined with mandated production cutbacks from numerous co-ops and the introduction of the Farmers to Families Food Box program caused CME cheese prices to surge to a record high \$3.00 per pound.

The rapid runup in cheese prices impacted the Federal Order Class III price. However, prices for butter and nonfat dry milk did not surge, leaving the Class IV price significantly lower than Class III. Unlike Class I milk which is required to be pooled, handlers of manufacturing milk have the option to pool their milk, and their decision can be made after FMMO prices are announced. In mid-June it became apparent that the large price discrepancy between Class III and IV would result in unprecedented negative PPDs and massive depooling of Class III milk. At the time it appeared that negative PPDs and depooling would be a two to three-month issue. In reality the

situation will persist from June through November.

The impact depooling has on announced FMMO prices is shown by the following hypothetical FMMO pool. Table 1 shows a FMMO that typically has 320 million pounds of milk pooled, including 200 million pounds of Class III. Using October's Class prices, the Uniform Price in this FMMO is \$18.85/cwt., and the PPD is -\$2.76/cwt.

In that scenario, Class III handlers would need to decide whether to pool their milk and pay \$2.76/cwt. to the order's pool or to depool their milk and keep the \$2.76/cwt. for themselves. Table 2 shows the impact of all the Class III milk being depooled except 10 million pounds. The results are dramatic causing the Uniform Price to fall to \$14.81/cwt. and the PPD to drop to -\$6.80.

The large negative PPD's continue to be a topic of discussion within USDA and industry stakeholders. While negative PPDs have occurred in the past, FMMOs have never had such a large gap between Class III and IV values whose impact is made greater when large volumes of milk are not pooled. While the PPD value is in the forefront of everyone's mind, a vast majority of the producer milk value is found in its components value. Since 2000, the average value of the PPD compared with the total value received by the producer is only 3 percent, while the protein value is nearly 50 percent and the butterfat value is over 40 percent.

October 2020 PPD Example				Table 1	
Class	Pooled pounds	% Utilization	Price	Pooled \$\$	
Class I	50,000,000	15.6%	\$ 15.25	\$ 7,625,000	
Class II	20,000,000	6.3%	\$ 13.63	\$ 2,726,000	
Class III	200,000,000	62.5%	\$ 21.61	\$ 43,220,000	
Class IV	50,000,000	15.6%	\$ 13.47	\$ 6,735,000	
Total	320,000,000			\$ 60,306,000	
Uniform Price/cwt.				\$ 18.85	
PPD				\$ (2.76)	
Example with Depooling				Table 2	
Class	Pooled pounds	% Utilization	Price	Pooled \$\$	
Class I	50,000,000	38.5%	\$ 15.25	\$ 7,625,000	
Class II	20,000,000	15.4%	\$ 13.63	\$ 2,726,000	
Class III	10,000,000	7.7%	\$ 21.61	\$ 2,161,000	
Class IV	50,000,000	38.5%	\$ 13.47	\$ 6,735,000	
Total	130,000,000			\$ 19,247,000	
Uniform Price/cwt.				\$ 14.81	
PPD				\$ (6.80)	

Two facets of the Class I price also impact PPDs. First, the Class I price is announced in advance of the month to which it applies, whereas Class III and IV prices are determined at the end of the month. The six-week time lag means that the underlying commodity prices can change significantly from the time the Class I price is determined until Class III and IV prices are calculated. If commodity prices increase rapidly, the Class I price will be lower than Classes III and IV, and that will contribute to negative PPDs. More recently the current Class I mover was adopted as part of the 2018 Farm Bill. Instead of being the higher of the Class III or IV price, the Class I price was changed to be the average of III and IV, plus \$0.74/cwt. Since June this year, the Class III price has exceeded the Class IV price by an average of \$7.00 to \$8.00/cwt. The new Class I formula has resulted in the Class I price being significantly lower than Class III.

Table 3 estimates the impact of depooled milk in October. Over \$342 million of Class III value may have been left out of the 11 Federal Orders that month, and nearly \$3.7 billion from June through October. The impact of the depooled milk is two-fold. First, the announced Uniform Prices are not reflective of milk’s value in the marketplace. Second, producers who are paid based on the Uniform Price receive less for their milk.

What are possible solutions? In all likelihood a combination of actions will be needed. Some stakeholders argue that the old Class I mover (higher of Class III or Class IV) should be reinstated. However, because the change was made as part of the Farm Bill it is statutorily prevented from being changed until June 2021. Even then, a change to the Class I mover would need to be considered as part of a rulemaking proceeding or legislatively

changed by Congress. Another option would be to price Class I milk at the same time as Class III and IV, at the end of the month. That would eliminate the six-week time lag between the prices.

Other solutions being discussed include retaining more of the Class III value in the pool by tightening pooling standards. However, in an unprecedented year like this, anything short of mandatory pooling would most likely still lead to large amounts of milk not pooled.

Market-based solutions would include increasing export sales of milk powders and manufacturing more cheese, both of which could bring Class III and IV prices into a more normal price alignment. Global demand is slowing increasing. A new cheese plant is beginning production in Michigan which will produce approximately 800,000 pounds of cheese per day when fully operational in mid-2021, an increase of about 2.4% of total U.S. cheese production.

Unfortunately, there are no quick and easy solutions to the price relationships experienced during 2020 and their impacts on FMMO uniform prices. However, we can expect numerous proposals to be put forth for consideration with the potential of a Federal Order hearing at some point in 2021. National All-Jersey Inc. will be analyzing any potential changes to FMMO pricing from the aspect of, “How will this impact the production of milk components most in demand by consumers?”

Table 3 Federal Order	October 2019 Class III pooled lb.	October 2020 Class III pooled lbs.	October 2020 PPD	October Estimated 2020 Value w/o Depooling	Actual October 2020 value	Difference
Northeast (Boston) FO #1	586,064,825	588,765,509	\$ (4.54)	\$ 139,127,621.09	\$ 143,345,980.18	\$ (4,218,359.09)
Mideast (Cleveland) FO #33	293,179,972	85,452,639	\$ (6.87)	\$ 66,222,222.45	\$ 23,113,126.87	\$ 43,109,095.58
Upper Midwest (Chicago) FO #30	1,429,279,366	384,515,922	\$ (4.43)	\$ 329,922,142.35	\$ 88,847,610.20	\$ 241,074,532.15
Central (Kansas City) FO #32	136,716,268	35,412,278	\$ (7.38)	\$ 34,971,158.46	\$ 10,796,902.12	\$ 24,174,256.34
California (Los Angeles) FO #51	95,825,548	13,633,459	\$ (7.73)	\$ 23,361,183.36	\$ 5,286,543.46	\$ 18,074,639.90
Southwest (Dallas) FO #126	8,346,942	8,960,195	\$ (7.38)	\$ 3,947,212.28	\$ 5,186,180.04	\$ (1,238,967.76)
Pacific Northwest (Seattle) FO #124	173,983,207	179,944,947	\$ (5.77)	\$ 40,973,479.79	\$ 42,552,886.43	\$ (1,579,406.64)
Appalachian (Charlotte) FO #5	17,982,424	973,135	N/A	\$ 4,232,331.50	\$ 326,710.51	\$ 3,905,620.99
Southeast (Atlanta) FO #7	6,058,163	6,641,054	N/A	\$ 1,497,459.76	\$ 1,346,635.97	\$ 150,823.79
Florida (Tampa) FO #6	1,933,188	330,950	N/A	\$ 425,481.47	\$ 93,828.67	\$ 331,652.80
Arizona (Phoenix) FO #131	102,213,102	12,478,343	N/A	\$ 27,105,424.12	\$ 8,013,450.39	\$ 19,091,973.73
Total	2,851,583,005	1,317,108,431		\$ 671,785,716.64	\$ 328,909,854.84	\$ 342,875,861.80

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NAJ Milk & Component Outlook - 2020 Prices through October

2020 AVERAGE STATISTICAL BLEND PRICE FOR EACH FEDERAL ORDER		2020 MILK VOLUME (Million #)		2020 AVERAGE JERSEY REGULATED BLEND PRICE	
Northeast (Boston)	\$16.99	Northeast (Boston)	22,355	Northeast (Boston)	\$21.99
Appalachian (Charlotte)	\$18.55	Appalachian (Charlotte)	4,376	Appalachian (Charlotte)	\$20.85
Southeast (Atlanta)	\$18.65	Southeast (Atlanta)	3,915	Southeast (Atlanta)	\$21.43
Florida (Tampa)	\$20.57	Florida (Tampa)	2,078	Florida (Tampa)	\$22.93
Mideast (Cleveland)	\$15.74	Mideast (Cleveland)	15,313	Mideast (Cleveland)	\$20.29
Upper Midwest (Chicago)	\$15.82	Upper Midwest (Chicago)	17,679	Upper Midwest (Chicago)	\$21.33
Central (Kansas City)	\$15.19	Central (Kansas City)	11,348	Central (Kansas City)	\$19.77
California (Los Angeles)	\$14.69	California (Los Angeles)	19,160	California (Los Angeles)	\$16.93
Southwest (Dallas)	\$15.64	Southwest (Dallas)	9,725	Southwest (Dallas)	\$19.53
Arizona (Phoenix)	\$15.59	Arizona (Phoenix)	3,743	Arizona (Phoenix)	\$17.90
<u>Pacific Northwest (Seattle)</u>	<u>\$15.54</u>	<u>Pacific Northwest (Seattle)</u>	<u>6,486</u>	<u>Pacific Northwest (Seattle)</u>	<u>\$19.56</u>
ALL FMMO MARKET AVERAGE	\$16.64	ALL FMMO MARKET TOTAL	116,177	ALL FMMO MARKET AVERAGE	\$20.23

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.

2020 AVERAGE JERSEY BLEND WITH ESTIMATED PROTEIN OR CHEESE YIELD PREMIUMS		2020 AVERAGE DOLLAR DIFFERENCE: JERSEY MILK WITH PREMIUMS VS. STATISTICAL BLEND PRICE		2020 AVERAGE PERCENT DIFFERENCE: JERSEY MILK WITH PREMIUMS VS. STATISTICAL BLEND PRICE	
Northeast (Boston)	\$22.22	Northeast (Boston)	\$5.25	Northeast (Boston)	30.7%
Appalachian (Charlotte) (includes protein prem.)	\$21.20	Appalachian (Charlotte)	\$2.47	Appalachian (Charlotte)	13.2%
Southeast (Atlanta)	\$21.43	Southeast (Atlanta)	\$2.27	Southeast (Atlanta)	11.9%
Florida (Tampa)	\$22.93	Florida (Tampa)	\$2.60	Florida (Tampa)	12.7%
Mideast (Cleveland) (includes protein premium)	\$20.88	Mideast (Cleveland)	\$5.14	Mideast (Cleveland)	32.8%
Upper Midwest (Chicago) (includes cy premium)	\$21.56	Upper Midwest (Chicago)	\$5.14	Upper Midwest (Chicago)	31.0%
Central (Kansas City)	\$19.77	Central (Kansas City)	\$4.56	Central (Kansas City)	30.0%
California (Los Angeles)	\$16.93	California (Los Angeles)	\$2.32	California (Los Angeles)	16.0%
Southwest (Dallas)	\$19.53	Southwest (Dallas)	\$4.00	Southwest (Dallas)	25.9%
Arizona (Phoenix) (includes protein)	\$18.25	Arizona (Phoenix)	\$2.63	Arizona (Phoenix)	16.9%
<u>Pacific Northwest (Seattle)</u>	<u>\$19.56</u>	<u>Pacific Northwest (Seattle)</u>	<u>\$4.07</u>	<u>Pacific Northwest (Seattle)</u>	<u>26.1%</u>
ALL FMMO MARKET AVERAGE	\$20.39	ALL FMMO MARKET AVERAGE	\$3.68	ALL FMMO MARKET AVERAGE	22.5%

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	2020	REGULATED MILK PRICES	2020	AVERAGE JERSEY PRICE ADJUSTMENT PER CWT:	2020
Butterfat	5.03	FMMO Milkfat	\$1.7385	FMMO Milkfat Adjustment	\$2.02
TRUE Protein	3.79	FMMO True Protein	\$3.6420	FMMO True Protein Adjustment	\$2.26
Other Solids	5.73	FMMO Other Solids	\$0.1600	FMMO Other Solids Adjustment	(\$0.01)
Solids Not Fat (SNF)	9.52				
Cheese Yield (90% Fat Recovery, 38% Moisture)	13.10				
CME Block Cheese Price	\$2.03				

NAJ Milk & Component Outlook - October 2020 Jersey Price Comparisons

<u>OCT'20 STATISTICAL BLEND PRICE</u>		<u>OCT'20 MONTHLY MILK VOLUME</u> (Million #)		<u>OCT'20 JERSEY REGULATED BLEND PRICE</u>	
Northeast (Boston)	\$17.07	Northeast (Boston)	2,262	Northeast (Boston)	\$23.45
Appalachian (Charlotte)	\$17.82	Appalachian (Charlotte)	417	Appalachian (Charlotte)	\$19.84
Southeast (Atlanta)	\$17.86	Southeast (Atlanta)	386	Southeast (Atlanta)	\$19.36
Florida (Tampa)	\$19.65	Florida (Tampa)	214	Florida (Tampa)	\$21.94
Mideast (Cleveland)	\$14.74	Mideast (Cleveland)	1,279	Mideast (Cleveland)	\$24.36
Upper Midwest (Chicago)	\$17.18	Upper Midwest (Chicago)	926	Upper Midwest (Chicago)	\$23.31
Central (Kansas City)	\$14.23	Central (Kansas City)	867	Central (Kansas City)	\$20.17
California (Los Angeles)	\$13.88	California (Los Angeles)	1,809	California (Los Angeles)	\$17.92
Southwest (Dallas)	\$14.23	Southwest (Dallas)	938	Southwest (Dallas)	\$20.17
Arizona (Phoenix)	\$15.24	Arizona (Phoenix)	302	Arizona (Phoenix)	\$17.54
<u>Pacific Northwest (Seattle)</u>	<u>\$15.84</u>	<u>Pacific Northwest (Seattle)</u>	<u>616</u>	<u>Pacific Northwest (Seattle)</u>	<u>\$21.39</u>
ALL FMMO MARKET AVERAGE	\$16.16	ALL FMMO MARKET TOTAL	10,014	ALL FMMO MARKET AVERAGE	\$20.86

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>OCT '20 JERSEY BLEND WITH ESTIMATED PROTEIN OR CHEESE YIELD PREMIUMS</u>		<u>OCT'20 DOLLAR DIFFERENCE: JERSEY MILK WTH PREMIUMS VS. STATISTICAL BLEND PRICE</u>		<u>OCT'20 PERCENT DIFFERENCE: JERSEY MILK WTH PREMIUMS VS. STATISTICAL BLEND PRICE</u>	
Northeast (Boston)	\$23.73	Northeast (Boston)	\$6.66	Northeast (Boston)	39.0%
Appalachian (Charlotte) (includes protein prem.)	\$20.31	Appalachian (Charlotte)	\$2.49	Appalachian (Charlotte)	14.0%
Southeast (Atlanta)	\$19.36	Southeast (Atlanta)	\$2.29	Southeast (Atlanta)	13.4%
Florida (Tampa)	\$21.94	Florida (Tampa)	\$4.12	Florida (Tampa)	21.0%
Mideast (Cleveland) (includes protein premium)	\$25.05	Mideast (Cleveland)	\$10.31	Mideast (Cleveland)	70.0%
Upper Midwest (Chicago) (includes cy premium)	\$23.58	Upper Midwest (Chicago)	\$6.40	Upper Midwest (Chicago)	37.3%
Central (Kansas City)	\$20.17	Central (Kansas City)	\$5.94	Central (Kansas City)	41.7%
California (Los Angeles)	\$17.92	California (Los Angeles)	\$4.04	California (Los Angeles)	29.1%
Southwest (Dallas)	\$20.17	Southwest (Dallas)	\$5.94	Southwest (Dallas)	41.7%
Arizona (Phoenix) (includes protein)	\$18.03	Arizona (Phoenix)	\$2.79	Arizona (Phoenix)	18.3%
<u>Pacific Northwest (Seattle)</u>	<u>\$21.39</u>	<u>Pacific Northwest (Seattle)</u>	<u>\$5.55</u>	<u>Pacific Northwest (Seattle)</u>	<u>35.1%</u>
ALL FMMO MARKET AVERAGE	\$21.06	ALL FMMO MARKET AVERAGE	\$5.14	ALL FMMO MARKET AVERAGE	32.8%

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.

<u>ESTIMATED JERSEY MILK COMPOSITION</u>	<u>Oct-20</u>	<u>REGULATED MILK PRICES</u>	<u>Oct-20</u>	<u>AVERAGE JERSEY PRICE ADJUSTMENT PER CWT:</u>	<u>Oct-20</u>
Butterfat	5.14	FMMO Milkfat	\$ 1.6388	FMMO Milkfat Adjustment	\$1.94
TRUE Protein	4.08	FMMO True Protein	\$ 5.0146	FMMO True Protein Adjustment	\$4.10
Other Solids	5.73	FMMO Other Solids	\$ 0.1534	FMMO Other Solids Adjustment	(\$0.01)
Solids Not Fat (SNF)	9.81				
Cheese Yield (90% Fat Recovery, 38% Moisture)	13.90				
CME Block Cheese Price	\$ 2.71				