CDE DAIRY MARKETS & MANAGEMENT UPDATE

All prices — **JULY 20, 2021** — except where noted

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SHIFTING UTILIZATION: In the two and half years I have been working in the Pennsylvania dairy industry, Pennsylvania has lost over 12% of its dairy farms, but the herd size of those remaining has increased by 6% to 89 cows per dairy in 2020. This does not sound like much of a herd size increase, but it shows that these Pennsylvania dairy industry trends mirror the national trend of declining farm numbers but increased cows per dairy in the remaining dairies.

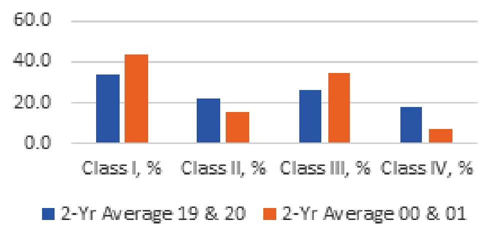
Like the consolidation trend, milk utilization trends have also shifted over the last several decades. In the late 1940s, fluid milk utilization (Class I) made up two-thirds or more of the processing across the U.S. Now, fluid milk is only about one-third of the milk utilization. I was recently asked to speak on a panel about Pennsylvania milk markets and to talk about shifting utilization in Pennsylvania. I learned some interesting things in my preparation for the panel and thought I would share some of what I learned. The current form of class pricing for Federal Milk Market Orders (FMMOs) began in 2000 with some modifications through the years, most recently with the change of the Class I mover calculation that began in May 2019.

Pennsylvania is covered by two FMMOs, the Northeast Order #1 (FO1) in the east and the Mideast Order #33 (FO33) in the west. For my evaluation, I compiled a 2-year class utilization average for FO1 and FO33 from historical reports available on the respective milk marketing order webpages for 2000 & 2001 and 2019 & 2020. I compared the two time periods to see how milk utilization has changed over the last 21 years. For this article, I averaged the utilizations of FO1 with FO33 to represent the entire state. In 2000 & 2001, Class I (fluid milk) represented 44% of the utilization across the state, Class II (ice cream, ice cream mix, and yogurt) represented 15%, Class III (cheese and whey products) was 34%, and Class IV (butter and powders) was only 7%. Compared to 2019 & 2020, Class I utilization fell to 34%, Class II increased to 22%, Class III decreased to 26%, and Class IV increased to 18%. This data shows a rather drastic drop over the last 21 years in Class I and Class III utilization, which shifted to more Class II and IV.

Over the last 21 years, Pennsylvania has become more reliant on Class II and IV to balance the market. I can think of two main reasons that this shift in utilization has occurred. First, consumption of fluid milk has been in decline for many decades. Secondly, although Pennsylvania dairy farm numbers and cow numbers have been on a steady decline in recent years, milk production has increased. With declining fluid milk consumption coupled with increasing milk production over the last 21 years, utilization has shifted to more Class II and IV products to balance the market. As a result of the shifting utilization, Pennsylvania has become a national leader in butter and ice cream production.

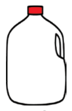
At a respectable 34%, Class I utilization still exceeds the other individual classes and is similar to national Class I utilization. However, that leaves another 66% percent of milk that must go to production of other dairy products. Thankfully, that has been accomplished in large part by a 47% increase in Class II products and a 153% increase in Class IV products over the last couple of decades. We, as an industry, should continue to do everything we can to reverse the current declining fluid milk consumption trend, but we should also not take Pennsylvania's capacity to make Class II, III, and IV dairy products for granted. After all, the majority of Pennsylvania milk ends up as a product in one of these three classes.

Class Utilization (%) 2000 & 2001 vs. 2019 & 2020



Prices change daily. This market information is an example for educational purposes. The market data below are compiled weekly by Farmshine, via CME & USDA reports

CME DAILY FUTURES & OPTIONS TRADING — JULY 20, 2021 AT THE CLOSE



*AVG = Average basis for North-East and Mid-East

*MARGIN = Milk Price over Feed Cost per cwt. YELLOW = payment triggered

	JUL-21	AUG-21	SEP-21	OCT-21	NOV-21	DEC-21	JAN-22	FEB-22	MAR-22	APR-22	MAY-22	JUN-22	TREND
CLASS III MILK FUTURES ($/CWT) vs. wk ago: *2021 $0.75-1.50 lower (except current month off $0.25), 2022 off $0.10-0.30* — *12-Month Avg.* 17.34↓↓	16.66	16.29	16.88	17.59	17.85	17.66	17.46	17.50	17.46	17.60	17.61	17.56	↓↓
CLASS IV MILK FUTURES ($/CWT) vs. week ago: *2021 $0.20-0.40 lower (except current month steady), 2022 $0.05-0.15 lower* — *12-Month Avg.* 16.57↓↓	15.96	15.81	15.86	16.05	16.26	16.45	16.65	16.85	17.04	17.20	17.25	17.30	↓↓

HIGHEST & LOWEST DAILY SETTLE PRICE FOR CL. III OVER LIFE OF CONTRACT & MONTH / YEAR IT OCCURRED

	JUL-21	AUG-21	SEP-21	OCT-21	NOV-21	DEC-21	JAN-22	FEB-22	MAR-22	APR-22	MAY-22	JUN-22
High	20.02 04/21	20.08 05/21	20.04 05/21	19.97 05/21	19.66 05/21	19.29 05/21	18.95 05/21	18.42 04/21	18.21 05/21	18.16 05/21	18.21 05/21	18.19 05/21
Low	14.31 03/20	14.50 03/20	14.50 03/20	14.50 03/20	14.21 03/20	14.19 03/20	14.50 03/20	14.25 03/20	14.70 03/20	14.85 03/20	14.75 03/20	14.71 03/20

MILK BASIS ($/CWT) — **PA BASIS & 2016-19 AVG OF PA/NY/VT/OH** — ***YOUR INDIVIDUAL BASIS WILL VARY (MAILBOX - CLASS 3)***

	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN
PA	1.03	0.95	0.79	0.60	0.79	1.17	0.62	1.53	2.29	1.82	1.58	0.99
*AVG	1.31	1.15	0.67	0.74	1.38	0.85	1.67	2.55	2.15	1.66	1.45	1.25

DMC OFFICIAL GROSS MARGINS *per cwt.(USDA All-Milk, corn/alfalfa hay & Illinois soybean prices, feed for all classes of dairy cattle on the farm)*

DMC	MAR-20	APR-20	MAY-20	JUNE-20	JULY-20	AUG-20	SEP-20	OCT-20	NOV-20	DEC-20	JAN-21	FEB-21	MAR-21	APR-21	*MAY-21	TREND
	9.15	6.03	5.37	9.99	12.41	10.83	9.40	11.13	11.87	8.78	7.14	6.22	6.46	6.94	*6.89	↓↓

U.S. AVG MILK MARGIN *per 100 lbs milk based on 75-lb herd avg & USDA's All-Milk price, USDA-reported corn & alfalfa hay & Ill. soybean prices (lactating feed only)*

PA AVG MILK MARGIN *per 100 lbs milk based on 75-lb herd average and USDA's PA All-Milk price, USDA corn & alfalfa hay & Buff., NY soybean prices (lactating feed only)*

	FEB-20	MAR-20	APR-20	MAY-20	JUN-20	JUL-20	AUG-20	SEP-20	OCT-20	NOV-20	DEC-20	JAN-21	FEB-21	MAR-21	APR-21	MAY-21	TREND
U.S. AVG	13.18	12.23	8.77	8.06	12.59	15.04	13.43	12.33	14.44	15.47	12.51	11.25	10.51	10.66	*11.25	*12.31	↑↑
PA AVG	12.20	11.24	8.27	6.79	9.44	12.67	11.10	10.91	11.31	12.36	10.53	8.56	8.15	9.24	*10.35	*11.43	↑↑

CLASS III MILK ($/CWT) **OPTIONS — PUTS — Daily Strike Price** / Premium

16.75 0.11 **16.50** 0.52 **16.75** 0.68 **17.50** 0.85 **17.75** 0.95 **17.75** 1.11 **17.50** 1.07 **17.50** 1.08 **17.50** 1.12 **17.50** 1.07 **17.50** 1.05 **17.50** 1.10

Example Daily Strike **Price** / Premium

CORN ($/BU) OPTIONS — CALLS	SEP-21	DEC-21	MAR-22	JUL-22
	5.55 35.30	**5.70** 43.40	**6.10** 38.40	**6.50** 36.50
	6.40 07.50	**8.00** 04.20	**7.70** 09.10	**8.40** 09.20

SOYMEAL ($/TON) OPTIONS — CALLS	AUG-21	OCT-21	DEC-21	MAR-22
	330 35.55	**340** 31.20	**340** 37.85	**340** 37.40
	370 02.25	**440** 02.70	**490** 02.75	**490** 03.50

CORN FUTURES ($/BU)

	SEP-21	DEC-21	MAR-22	MAY-22	JUL-22	SEP-22	DEC-22	MAR-23	MAY-23	JUL-23	SEP-23	DEC-23	TREND
	5.716	5.656	5.730	5.770	5.764	5.190	5.016	5.086	5.122	5.144	4.714	4.572	↑↑
WEEK AGO	5.682	5.586	5.664	5.706	5.702	5.104	4.940	5.010	5.044	5.070	4.646	4.530	

SOYMEAL FUTURES ($/TON)

	AUG-21	SEP-21	OCT-21	DEC-21	JAN-22	MAR-22	MAY-22	JUL-22	AUG-22	SEP-22	OCT-22	DEC-23	TREND
	365.5	365.6	365.8	369.4	365.6	363.8	364.9	362.7	358.8	352.6	352.4	350.9	↓↓
WEEK AGO	368.7	368.4	367.8	370.8	370.4	367.6	366.5	368.3	366.0	361.1	354.8	353.8	

PA MILK MARGIN & IOFC–LATEST PSU VALUES – *MAY 2021

*=NEW

FEED = $/CWT.
IOFC = $/COW

	FEED COST ($/CWT milk)	IOFC ($/COW @ 75 lbs milk)	PA MILK MARGIN ($/CWT milk)
***MAY** *(estimated)*	*8.72↓↓	*8.57↑↑	*11.43↑↑
*PREV MO	8.74	7.77	*10.35
YR AGO	7.21	5.40	6.79

CME DAIRY CASH-SETTLED FUTURES ($/LB) 07/20/21

	JUL	AUG	SEP	OCT	NOV	DEC	JAN	TREND	SPOT CASH 07/20/21	TREND
NFDM	1.253	1.240	1.235	1.250	1.280	1.275	1.285	↓↓	1.2300	↓↓
WHEY	0.604	0.535	0.515	0.500	0.499	0.487	0.490	↓↓	0.5375	↑↑
BUTTER	1.740	1.730	1.730	1.757	1.778	1.785	1.800	↓↓	1.7125	↑↑
CHEESE	1.615	1.621	1.690	1.785	1.812	1.807	1.785	↓↓	See Below	

CME SPOT CHEESE: BARRELS 1.3850 / 40 LB BLOCKS 1.5850 ↓↓ / ↓↓

**USDA MAR-21	ALL-MILK	BF	*MAILBOX (NEW*)
*FL	$20.50	3.63	$19.06
*MN	$18.60	4.27	$17.60
*N.ENG	$18.10	4.09	$17.54
*SE	$19.20	3.74	$17.36
*APP	$19.10	3.91	$17.33
*WI	$17.50	4.04	$17.31
*IA	$18.10	4.19	$16.99
*OH	$18.10	3.96	$16.95
*IN	$17.40	4.01	$16.93
*NY	$17.90	4.06	$16.93
*IL	$17.00	4.03	$16.91
*PA western PA only			$16.77
*PAeast	$17.90	4.03	$16.66
*WA/OR	$18.50	4.14	$16.48
*U.S.	$17.40	4.05	$16.41
*MO	N/A	N/A	$16.28
*CA	$17.10	3.96	$16.19
*TX	$17.10	4.28	$15.69
*MI	$16.40	3.94	$15.56
*NE/KS	$15.80	4.04	$15.20
*NM	$15.40	3.89	$14.49

ANNOUNCED FEDERAL ORDER PRICES ($/CWT)

*=NEW

	CL I ADV↓↓	CL II↑↑	CL III↓↓	CL IV↑↑	ALL-MILK-U.S	ALL-MILK-PA
	17.42(JUL)	16.66(JUN)	17.21(JUN)	16.35(JUN)	19.20(MAY)↑↑ 3.93F	19.30(MAY)↑↑ 3.92F
MONTH AGO	18.29	16.22	18.96	16.16	18.40	18.40
YEAR AGO	16.56	12.99	21.04	12.90	13.60	14.00

CURRENT FEDERAL ORDER VALUES ($/LB) * = *NEW

WEIGHTED AVG. 4-WK JUNE 1-26, 2021

PRODUCT	VALUE	MAKE ALLOW	NET	
CHEESE	1.6439	0.2003	1.4436	↓↓
BUTTER	1.7934	0.1715	1.6219	↓↓
NFDM	1.2696	0.1678	1.1018	↑↑
DRYWHEY	0.6437	0.1991	0.4446	↓↓

*JUNE 2021 COMPONENTS		
PROT	2.5834	↓↓
B.FAT	1.9641	↓↓
N.FAT	1.0908	↑↑
OTHER	0.4579	↓↓

CATTLE - DAIRY PURPOSES($/HD) NORTHEAST (Avg. July 14, 2021 sale New Holland, PA)

	COWS: Fresh	Bred	Springing	HEIFERS: Bred	Beef x	Springing	Open: 300-600 lbs	Beef X	600-900 lbs	900-1000 lbs	BULLS(1100-1300 lb)
	1050	800	N/A	875	860	950	400	400	575	900	900
MONTH AGO COMPARISON	1150	1015	930	875	N/A	960 ltd	340	N/A	600	910	1150

Price averages do not include lower-end 'common'

Avg. of prices reported by USDA Market News for PA Auction Markets July 15-20, 2021

CULL MARKET COWS ($/CWT LIVEWEIGHT)

	Premium White	Breakers	Boners	Lean
Average to high dressing	N/A	72.10↓↓	66.25↓↓	55.91↓↓
WEEK AGO	N/A	76.60	66.85	56.35
YEAR AGO		63.75	63.25	61.35

		CURRENT	Beef X	WEEK AGO	YR AGO	
FED HOLSTEIN STEERS ($/CWT LIVEWEIGHT)	Choice & Prime 1250-1550 lbs light test	90.00		97.85	85.25	↓↓
BULL CALVES:	No. 1 & 2, 90-130 lbs	100.00	235.00	95.00	80.00	↑↑
	70-85 lbs	65.00	200.00	75.00	55.00	↓↓