CDE DAIRY MARKETS & MANAGEMENT UPDATE

All prices — **TUESDAY, FEB. 11, 2020** — except where noted

Heifer inventory: Last year's milk price was a welcome relief compared to the previous two years. The U.S. All-Milk price for 2019 averaged $18.60 per hundredweight, the highest since 2014. After several years of low prices, 2019 was not enough time to see much expansion in the industry and total milk production only increased about 0.3% over 2018. Milk price projections for 2020 are looking even better than 2019, with the All-Milk price forecasted to average $19.25. Milk production is expected to increase by 1.7% this year. The question is, will there be enough heifers for much expansion to occur?

To help answer this question, we can look at heifer inventory and dairy cow slaughter trends over the last few years to evaluate growth potential. Dairy cow slaughter has increased every year for at least the last four years. In 2016, dairy cow slaughter was 2.886 million head, increasing to 3.224 million in 2019. This represents an increase in the national cull rate from 31.0% to 34.5% over the four-year period. Dairy cow slaughter in 2019 reached a 33-year high. In the same time-frame, the annual number of heifers due to calve increased from 3.937 million to 4 million from 2016 to 2017 before falling to 3.006 million in 2019.

When you compare slaughter numbers to heifers due to calve, you can see why cow numbers have fallen over the last couple of years. Dairy cow slaughter has outpaced the number of heifers due to calve. This trend is expected to continue into 2020 with the herd size projected to average 9.335 million with less than 3 million heifers due to calve. If milk price continues to increase, it may affect dairy cow slaughter. The 1.7% milk production increase is expected to be driven by increased production per cow, not increased cow numbers.

Why is the heifer inventory shrinking? Two major things could be attributed to the declining heifer inventory. Genomics testing has changed the way cows are bred. A lot more dairies are breeding animals to beef semen to achieve faster genetic advancement in their herd by breeding the better animals to dairy semen. Heifer inventories are reduced because the resulting offspring of beef crossbreds are sold to be raised for beef instead of being raised as replacements.

During the extended milk price downturn, perhaps breeding protocols change. Gender-selected semen is significantly more expensive than conventional semen. Dairy farmers may have limited the use of gender-selected semen or cut it out completely, reducing the number of heifers born. If heifers calve the first time at approximately two years old, that means there is a 2.75-year lag from the time of conception to when she calves the first time. If dairy farmers limited the use of gender-selected semen in 2017 and 2018 due to low milk price, we are seeing the resulting lower heifer numbers now. Likewise, if gender-selected semen usage increased in 2019, we won't see those heifers enter the milking herds until 2021. Based on heifer inventories predicted and continued higher cull rates, I think it will be difficult for the national herd to increase.

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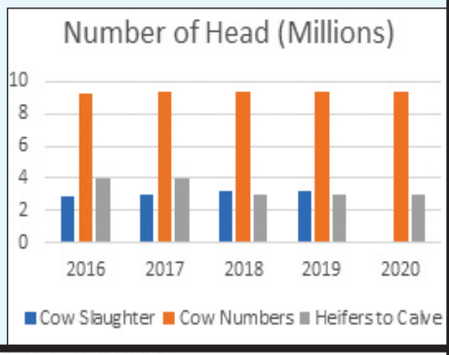

Prices change daily. This market information is an example for educational purposes. The market data below are compiled weekly by Farmshine, via CME & USDA reports

CME DAILY FUTURES & OPTIONS TRADING — FEB. 11, 2020 AT THE CLOSE

	JAN-20	FEB-20	MAR-20	APR-20	MAY-20	JUN-20	JUL-20	AUG-20	SEP-20	OCT-20	NOV-20	DEC-20	TREND
CLASS III MILK FUTURES ($/CWT)	17.04	17.29	17.42	17.39	17.52	17.79	17.89	17.93	17.90	17.79	17.47	17.16	↑↑
WEEK AGO	17.05	17.03	17.30	17.25	17.08	17.18	17.42	17.50	17.60	17.53	17.45	17.25	

HIGHEST & LOWEST DAILY SETTLE PRICE OVER LIFE OF CONTRACT *AND MONTH/YEAR IT OCCURRED*

19.34	12/19	18.92	12/19	18.16	12/19	17.76	12/19	17.62	01/20	17.73	01/20	17.85	01/20	17.95	01/20	18.05	01/20	18.01	01/20	17.95	01/20	17.67	01/20
14.62	11/18	14.63	11/18	14.59	11/18	14.65	11/18	15.12	11/18	15.01	11/18	15.01	11/18	14.99	11/18	14.52	11/18	14.52	11/18	15.02	11/18	15.50	01/19

MILK BASIS ($/CWT) — **PA BASIS & 2014-16 AVG OF PA/NY/VT/OH** — ***YOUR INDIVIDUAL BASIS WILL VARY (MAILBOX - CLASS 3)***

PA	2.30	1.81	1.58	1.19	1.60	1.28	1.01	0.85	1.33	1.87	1.70	2.75
*AVG	2.70	2.25	2.02	1.25	2.14	1.80	1.12	0.90	1.32	1.82	1.65	2.72

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

MPP NOV-18	DEC-18	DMC	JAN-19	FEB-19	MAR-19	APR-19	MAY-19	JUN-19	JUL-19	AUG-19	SEP-19	OCT-19	NOV-19	*DEC-19	
8.66	7.85		7.71	7.91	8.66	8.82	9.00	8.63	9.27	9.85	10.41	10.88	12.21	*11.95	↓↓

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)*

NOV-18	DEC-18	JAN-19	FEB-19	MAR-19	APR-19	MAY-19	JUN-19	JUL-19	AUG-19	SEP-19	OCT-19	*NOV-19	*DEC-19	*JAN-20	
11.40	10.63	10.79	11.00	11.63	11.61	11.76	11.82	12.52	12.94	13.39	13.98	*15.29	*14.94	*12.98	↓↓

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)*

11.29	10.46	10.37	11.34	11.39	11.21	11.54	11.52	11.48	12.73	13.17	13.09	*13.76	*13.78	*13.09

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

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

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

17.00	0.05	17.25	0.25	17.50	0.44	17.50	0.52	17.50	0.47	17.75	0.51	18.00	0.64	18.00	0.67	18.00	0.70	17.75	0.68	17.50	0.70	17.25	0.75

MAR-20	JUL-20	SEP-20	DEC-20
CORN ($/BU) OPTIONS — CALLS			
3.65 18.10	3.90 16.30	3.90 21.20	4.00 22.10
3.90 01.10	4.60 02.70	4.70 05.00	5.10 04.00

Example Daily Strike Price / Premium

MAR-20	JUL-20	SEP-20	DEC-20
SOYMEAL ($/TON) OPTIONS — CALLS			
270 21.75	280 24.40	300 15.15	300 19.40
295 01.20	340 02.20	340 04.25	380 02.55

CORN FUTURES ($/BU)

	MAR-20	MAY-20	JUL-20	SEP-20	DEC-20	MAR-21	MAY-21	JUL-21	SEP-21	DEC-21	JUL-21	SEP-21	TREND
	3.830	3.872	3.902	3.886	3.930	4.024	4.060	4.080	3.984	4.000	4.086	4.094	mixed
WEEK AGO	3.806	3.864	3.910	3.886	3.924	4.016	4.056	4.082	4.002	4.020	4.106	4.114	

SOYMEAL FUTURES ($/TON)

	MAR-20	MAY-20	JUL-20	AUG-20	SEP-20	OCT-20	DEC-20	JAN-21	MAR-21	MAY-21	JUL-21	AUG-21	TREND
	291.7	297.4	302.7	304.2	305.0	305.3	308.1	308.0	305.3	305.5	307.0	306.8	↑↑
WEEK AGO	287.4	293.1	298.4	300.3	301.7	302.6	306.3	306.7	305.2	305.8	307.8	307.9	

** = NEW*

FEED = $/CWT.

IOFC = $/COW

PA MILK MARGIN & IOFC–LATEST PSU VALUES – *JAN. 2020

	FEED COST ($/CWT milk)	IOFC ($/COW @ 75 lbs milk)	PA MILK MARGIN ($/CWT milk)
*JAN.	*7.19↑↑	*9.82 ↓↓	*13.09 ↓↓
*PREV MO	*7.12	*10.34	*13.78
YR AGO	7.33	7.78	10.37

CME DAIRY CASH-SETTLED FUTURES ($/LB) 02/11/20 SPOT CASH TREND

	JAN	FEB	MAR	APR	MAY	JUN	JUL		02/11/20	
NFDM	1.238	1.209	1.223	1.236	1.247	1.264	1.272	*mixed*	1.2225	↑↑
WHEY	0.369	0.390	0.407	0.416	0.429	0.433	0.437	↑↑	0.3950	↑↑
BUTTER	1.870	1.922	1.975	2.019	2.051	2.080	2.093	↓↓	1.8150	↓↓
CHEESE	1.791	1.795	1.788	1.784	1.799	1.821	1.829	*mixed*	*See Below*	

CME SPOT CHEESE: BARRELS 1.5600 / 40 LB BLOCKS 1.8800 ↑↑ / ↓↓

****USDA SEP. 2019****

	ALL-MILK	MAILBOX
*FL	$22.50	$19.81
*WI	$19.90	$19.60
*N.ENGL	$19.70	$19.39
SE	$20.70	$19.12
*APPAL	$20.10	$18.85
*U.S.	$19.30	$18.58
*PA	$19.60	$18.50
*NY	$19.40	$18.43
*IN	$18.80	$18.35
*OH	$19.30	$18.34
*MI	$17.90	$17.15

***=NEW ANNOUNCED FEDERAL ORDER PRICES** ($/CWT)

CL I ADV↓↓	*CL II↑↑	*CL III↓↓	*CL IV↓↓	ALL-MILK-U.S	ALL-MILK-PA
17.55(FEB)	*17.05(JAN)	*17.05(JAN)	*16.65(JAN)	20.70(DEC)↓↓	20.90(DEC)↓↓
				4.05F	4.03F
MONTH AGO					
19.01	16.81	19.37	16.70	21.00	21.00
YEAR AGO					
15.30	15.74	13.96	15.48	16.60	17.60

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

WEIGHTED AVG. 4-WK JAN. 1-31, 2020

PRODUCT	VALUE	MAKE ALLOW	NET	
*CHEESE	1.8092	0.2003	1.6089	↓↓
*BUTTER	1.9153	0.1715	1.7438	↓↓
*NFDM	1.2451	0.1678	1.0773	↑↑
*DRYWHEY	0.3367	0.1991	0.1376	↑↑

*JAN. 2020 COMPONENTS		
*PROT	2.9606	↓↓
*B.FAT	2.1117	↓↓
*N.FAT	1.0665	↑↑
*OTHER	0.1417	↑↑

CATTLE - DAIRY PURPOSES($/HD) **NORTHEAST** (Avg. FEB. 5, 2020 sale New Holland, PA)

COWS Fresh	Bred	Springing	HEIFERS: Bred	Beef x (bred)	Springing	Open: 300-600 lbs	Beef X	600-800 lbs	800-1200 lbs	BULLS (600-1800 lb)
1075	800	1200	750	N/A	825	350	N/A	400	N/A	990
FOUR WEEK RUNNING AVG										
1000	825	1100	700	N/A	850	300	N/A	425	600	950

Price averages do not include lower-end 'common' cows and heifers.

Avg. of prices reported by USDA Market News for PA & NY Auction Markets Feb. 6-11, 2020

CULL MARKET COWS ($/CWT LIVEWEIGHT)

Premium White	Breakers	Boners	Lean	
N/A	66.60↑↑	64.10↑↑	56.50↑↑	
WEEK AGO				
N/A	64.50	60.50	52.50	
YEAR AGO				
N/A	59.00	53.75	49.50	

Average to high dressing

FED HOLSTEIN STEERS ($/CWT LIVEWEIGHT)

	CURRENT	WEEK AGO	YR AGO	
Choice & Prime 1250-1550 lbs light test	87.60	88.00	85.00	↓↓
BULL CALVES: No. 1 & 2, 90-130 lbs	96.00	50.00	43.00	↑↑
70-85 lbs	75.00	30.00	25.00	↑↑

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