CDE DAIRY MARK MANAGEMENT UPDATE

Per capita dairy consumption: The last time per capita dairy consumption was higher than 2021, Dwight Eisenhour was the president, and my Baby Boomer parents were not yet teenagers. Per capita consumption is defined as the annualized total dairy product consumption divided by the U.S. population. According to USDA data, per capita consumption was 672 pounds per person on a milk-fat, milk-equivalent basis in 1959. From then through the mid-1980s per capita consumption declined to a low of 541 pounds per person. Between the mid-1980s until 2004, consumption oscillated between the 560s and 590s. In 2005, per capita consumption climbed to 603 pounds per person from 594 in 2004. It has been on a general upward trend since then. Since 2005, per capita consumption has only experienced a year-over-year decline four years out of 17, culminating in a

During this 17-year period, the largest jumps in consumption have occurred in the last seven years. Per capita consumption jumped 13 pounds per person in 2015 to 628 and climbed another 16 pounds per person to 644 in 2016. 2017 saw a 1 pound per person decline that was regained in 2018. 2019 consumption added eight pounds per person to reach 652. Three more pounds of growth occurred during 2020 to 655 then another healthy 12 pounds per person increase to reach 667 last year.

multi-decade high of 667 pounds per person in 2021.

Unfortunately, total fluid milk consumption continued its gradual decline last year, dropping to a new multi-decade low of 134 pounds per person, seven pounds (-5%) less than 2020. Per capita fluid milk consumption in 2021 was equivalent to about 15.8 gallons per person compared to 29.1 in 1975. That's a drop of nearly 50% in volume over the last 47 years. While there have been recent positive trends in certain fluid milk categories like whole milk, flavored milk, and lactose free fluid milk products, it has not been enough to offset declines in low fat and fat free fluid milk consumption to keep the entire category from declining.

For per capita consumption to be growing, it means that other categories are growing fast enough to offset fluid milk declines. Growth in cheese consumption has been the main driver over the last several years with yogurt and butter also helping offset the fluid milk decline. Butter consumption stayed relatively flat from 1975 until 2013 at an average of 4.5 pounds 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

*AVG =

per person, From 2013 to 2014 butter consumption rose one pound per person to 5.5 and has gained another pound since

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then to reach 6.5 pounds of butter consumed per person in 2021, a 47 year high. Yogurt consumption has grown over seven-fold since 1975 (2.0 pounds) to 14.3 pounds per person in 2021.

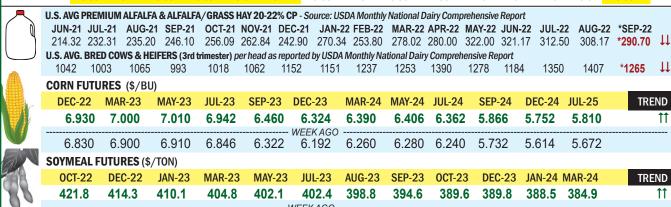
American-type cheeses and other than American cheeses have seen amazing growth in the last 47 years. American-type cheeses include mainly cheddar, Colby, Monterey, and jack cheeses, while "other" is basically everything else. At 16.1 pounds per person, 2021 American-type cheese consumption was nearly double 1975's consumption at 8.1. Furthermore, 2021 American cheese per capita consumption was a record at 0.5 pounds more than the previous record set in 2020. Other-type cheese has also seen significant growth over the last 47 years. During 1975, other cheeses were consumed at a rate of 6.1 pound per person. In 2021, that rate increased nearly 3.7 times to 22.3 pounds per person. This is 0.5 pounds less than the record 22.8 pounds per person set in 2019 and about one third of a pound less than 22.6 pounds in 2020.

Per capita dairy consumption in 1975 was 539 pounds. Considering that the U.S. population in 1975 was about 216 million compared to 337 million in 2021, there are 121 million more people eating 138 more pounds of dairy products per person. Over the same time, total U.S. milk production grew from 116 billion pounds to 226 billion pounds. Current consumption rates are helping to keep milk supply more in line with demand than it would be if per capita consumption was not growing.

Select Dairy Product Per Capita Consumption, lbs/person/yea

| o be growing, it means that other catego- | | | | | | | Total Per | |
|---|----------|-------|----------|---------|--------|--------|-------------|--|
| offset fluid milk declines. Growth in cheese | | Fluid | American | Other | | | Capita | |
| driver over the last several years with yo- | | Milk | Cheese | Cheese | Butter | Yogurt | Consumption | |
| set the fluid milk decline. Butter consump- | | | CHCCSC | Circosc | Dutter | Toguit | Consumption | |
| 975 until 2013 at an average of 4.5 pounds | 1975 | 247 | 8.1 | 6.1 | 4.7 | NA | 539 | |
| O I | 2020 | 141 | 15.6 | 22.6 | 6.3 | 13.6 | 655 | |
| oformation is an example for educational purposed weekly by Farmshine, via CME & USDA reports | 2021 | 134 | 16.1 | 22.3 | 6.5 | 14.3 | 667 | |
| a moonly by raminomity, has onle a copy reported | 2021 | 134 | 10.1 | 22.5 | 0.5 | 14.5 | 007 | |
| CME DAILY FUTURES & OPTIONS TO | RADING - | OCT. | 12, 2022 | AT THE | CLOSE | | | |
| | | | | | | | | |

| AVG - | | | | | | | | | | | | , - | | | | | | |
|----------------------|------------|---------|-----------|------------|-----------|----------------------|---------------|-------------|-------------|-------------------|---------------|------------------|-------------------------|----------|--------------------|-----------------|----------------|------------------------|
| Average basis for | OCT- | -22 | NOV- | -22 D | EC-22 | 2 JAN-2 | 3 FEE | 3-23 ľ | MAR-2 | 3 APR-2 | 3 MAY-2 | 3 JUN-2 | 23 JUI | L-23 | AUG-23 | SEP-2 | 3 TRE | END |
| North- | CLASS | III MIL | K FUTUF | RES (\$/CW | T) vs. wk | ago: Oct22 | ?-Jan23 \$ | 0.40-0.5 | 0 lower | ; Feb-Aug23 v | veak to \$0.1 | 0 lower; Ser | ot23 \$0.7 | 5 highei | r | 12-Mont | h Avg. 20.6 | 64↓↓ |
| East and | 21.8 | 35 | 21.20 | 6 2 | 0.72 | 20.30 | 20. | 44 | 20.48 | 20.42 | 20.42 | 20.4 | 4 20 | .44 | 20.44 | 20.44 | _ | $\downarrow\downarrow$ |
| Mid-East | CLASS | IV MIII | (FIITIIR | FS (\$/CW | nvs wk: | agn. Oct-No | w22 un \$(| 10-0 30 | n higher | Dec22-Jun23 | weak to \$0 | 30 lower: Iul | l-Sen23 st | eady to | \$0.20 highe | r 12-Mont | h Avg. 21.8 | RG NC |
| *MARGIN = Milk | 24.7 | | 23.8 | | 2.24 | 21.50 | 21. | | 21.42 | 21.38 | 21.29 | | | .53 | 21.35 | 20.20 | | KED |
| Price | CLAS | S III | MILK | (\$/CWT | OPT | IONS — | PUTS - | Daily | Strike | Price / Prer | nium | | | | | | | |
| over Feed | | | | | | | | | | 1.35 20.50 | | 1.50 20.5 | 50 1.57 2 | 20.50 | 1.54 20.5 0 | 1.59 20. | 25 1.68 | |
| Cost | MILK | (BAS | IS (\$/ | CWT) - | PA BA | ASIS & 20 | 16-19 | AVG OF | PA/N | Y/VT/OH | | INDIVIDU | | | . VARY (M. | AILBOX - | CLASS 3) |) |
| per cwt. | PA | 0.79 | 0.6 | 0 | 0.79 | 1.17 | 0. | 62 | 1.53 | 2.29 | 1.82 | 1.58 | 80 | .99 | 1.03 | 0.95 | | |
| ÝELLOW | *AVG | 0.67 | 0.7 | 4 | 1.38 | 0.85 | 1. | 67 | 2.55 | 2.15 | 1.66 | 1.4 | 5 1 | .25 | 1.31 | 1.15 | | |
| = ," | DMC (| OFFICI/ | L GROS | S MARG | INS per | cwt(USDA A | II-Milk, co | rn, alfalfa | a & III. so | ybean, feed fo | or ALL CLASS | ES of dairy of | cattle on fa | rm) Upo | dated with N | EW prem. a | falfa feed c | cost |
| payment | DMC | JUN- | 21 Jl | JL-21 A | UG-21 | SEP-21 | 0CT-21 | NOV-21 | L DEC- | 21 JAN-22 | FEB-22 | MAR-22 A | PR-22 I | //AY-22 | JUN-22 | JUL-22 */ | AUG-22 | |
| triggered | | 6.0 | 3 | 5.47 | 5.03 | 6.69 | 8.54 | 9.14 | 9. | 53 11.54 | 10.98 | 11.55 | 12.29 | 12.51 | 11.92 | 9.92 | 8.08 | Ħ |
| Ą | U.S. A | VG PRI | EMIUM | ALFALFA | & ALF | ALFA/GRAS | SS HAY 20 |)-22% CI | P - Sourc | ce: USDA Mon | thly National | Dairy Comp | rehensive | Report | | | | |
| | | | | | | | | | | | | | | | | | | |
| | JUN | -21 J | UL-21 | AUG-2 | 1 SEP- | -21 OCT- | 21 NOV- | 21 DEC | C-21 J | AN-22 FEB- | 22 MAR-2 | 2 APR-22 | MAY-22 | JUN-22 | 2 JUL-22 | AUG-22 | *SEP-22 | |



| | 0CT-22 | DEC-22 | JAN-23 | MAR-23 | MAY-23 | JUL-23 | AUG-23 | SEP-23 | OCT-23 | B DEC-2 | 3 JAN | -24 MA | R-24 | | TREND | |
|---------|--------------|----------------|----------------|-----------|------------|----------|----------|------------|---------|----------|---------|---------|------|----|----------|---|
| A.R. | 421.8 | 414.3 | 410.1 | 404.8 | 402.1 | 402.4 | 398.8 | 394.6 | 389.0 | 389.8 | 388 | 3.5 3 | 84.9 | | 11 | |
| 0 - | | | | | V | VEEK AGO | | | | | | | | | | |
| | 403.0 | 401.5 | 399.1 | 395.8 | | | | 391.0 | 386.6 | 386.7 | 7 385 | 5.6 38 | 82.2 | | | |
| *=NFW | PA MILK M | ARGIN & IOFO | C-LATEST F | PSU VALUE | S - *JULY | 2022 | CME DAII | RY CASH-SE | | | | | | | | |
| 71277 | | FEED COST | IOFC (\$ | | A MILK MAR | | (| OCT NO | / DEC | JAN23 FE | EB23 M | AR23 AF | 23°, | 1 | 10/12/2: | 2 |
| FEED = | | (\$/CWT milk) | @ 75 II | bs milk) | (\$/CWT m | ilk) | NFDM 1 | .570 1.53 | 5 1.502 | 1.510 1 | 1.510 1 | .515 1. | 520 | | 1.5250 | |
| \$/CWT. | *JULY (estin | nated) *9.8511 | *1 | 2.71↓↓ | *20.1 | 011 | WHEY 0 | 460 0.46 | 0.459 | 0.460 | 0.475 | .480 0. | 475 | 11 | 0.4100 | Ħ |
| | | | | | | | | | | | | | | | | |

| *=NFW | PA MILK MARGIN & 101 | -C-LAIEST PSU VAL | CIVIED | AIRY CAS | H-SEII | LED FU | IUKE2 (| (\$/LB) | 10/12 | /22 | SPUI | CASH IKEND | |
|-------------|----------------------------|-------------------|---|-------------|-------------|----------|---------|-----------|----------|---------|------------------|------------|--------------------|
| 71277 | FEED COST | | PA MILK MARGIN | | OCT | NOV | DEC | JAN23 | FEB23 | MAR23 | APR23 | | 10/12/22 |
| FEED = | (\$/CWT milk | () @ 75 lbs milk) | (\$/CWT milk) | NFDM | 1.570 | 1.535 | 1.502 | 1.510 | 1.510 | 1.515 | 1.520 | 11 | 1.5250↓↓ |
| \$/CWT. | *JULY(estimated) *9.851 | ↑ *12.71↓↓ | *20.10↓↓ | WHEY | 0.460 | 0.460 | 0.459 | 0.460 | 0.475 | 0.480 | 0.475 | 11 | 0.4100↓↓ |
| IOFC = | PREVIMO 9.07 | 13.98 | 20.78 | BUTTER | 3.170 | 3.016 | 2.697 | 2.589 | 2.510 | 2.500 | 2.490 | 11 | 3.1850↓↓ |
| \$/COW | YR AGO 8.46 | 7.53 | 10.04 | CHEESE | 2.177 | 2.117 | 2.082 | 2.038 | 2.041 | 2.064 | 2.070 | 11 | See Below |
| | Covers ONLY lactating feed | | | | CME SPO | OT CHEES | SE: BAF | RELS | 2.2000 | 40 LB I | BLOCK | S 2.05 | i 25 ↓ / ↑↑ |
| **USDA JUI | N-22 NEW * * = NEW AN | NOUNCED FEDE | DAI ORDER PRICE | S (\$ / CW) | n | *CIIE | DENTI | EEDEDA | I UDDE | R VALU | FC (¢ /11 | D) * = * | NEW |
| | 0.00 007.04 | | | . , | | | | | | | <u> </u> | - رد | 14214 |
| "FL \$31.00 | 3.60 \$27.91 | | *************************************** | *** | 1 MAIL 1/ D | A WEIGI | ITED AV | 0 4 14/1/ | CED 4 20 | 0000 | | * CEE | 2000 |

| \$/CVV1. | *JULY | estimated) *9. | 85↑↑ | *12.71↓↓ | *20.1 | 0↓↓ WH | IEY | 0.460 | 0.460 | 0.459 | 0.460 | 0.475 | 0.480 | 0.47 | 5 ## | 0.4100 |) †† (|
|----------------------------------|------------------------------|----------------|----------------|----------------|------------------|-----------------------------|----------------|--------------------|---------|--------|--------|----------|-----------|----------------|-------------|--------|---------------|
| IOFC = | PREV N | | .07 | 13.98 | 20.7 | '8 BU | TTER | 3.170 | 3.016 | 2.697 | 2.589 | 2.510 | 2.500 | 2.490 | 0 11 | 3.185 | οţţ |
| \$/COW | YR AGO | | .46 | 7.53 | 10.0 | 4 | | | | | | | | | - | See Be | |
| | Covers O | NLY lactating | feed, based on | 75 lb herd avg | ı, Buff., NY soy | price | | CME SPO | T CHEES | E: BAR | RELS | 2.2000 / | 40 LB E | 3LOC | KS 2.052 | 25 👭 / | <u> </u> |
| **USDA JUN | N-22 NEW * 3F *MAILBOX | *=NEW | ANNOUNC | ED FEDER/ | AL ORDER | PRICES (\$ | S/CWT |) | *CUR | RENT F | EDERA | L ORDE | R VALUE | ES (\$/ | /LB) * = */ | VEW | |
| *FL \$31.00 3 *SE \$29.90 3 | 3.60 \$27.91 3.66 \$27.41 | | | | | ALL-MILK-U.S | | | | | | | | (+/ | *SEP | | |
| *APP \$28.90 3 *MO N/A N | 3.82 \$27.41 N/A \$27.03 | 22.71(OCT) | *26.51(SEP) | *19.82(SEP) | *24.63(SEP) | *24.30(AUG) \$\frac{1}{2}\$ | ↓∗ 26 . | . 20 (AUG)↓ | | | | AKE ALLO | | | COMP | ONENTS | |
| *WA/OR\$28.40 4 *IL \$26.30 3 | 1.10 \$26.88 3.91 \$26.63 | | | MONTH AG | 0 | 3.93F | 3.8 | 33F | *CHEI | ESE 1. | 8847 (| 0.2003 | 1.6844 | L ## | *PROT | 1.8847 | 11 |
| *CA \$27.50 3 | 3.94 \$26.40 | 00.00 | 00.04 | 00.40 | 04.04 | 05.70 | | 00 | *DUT | TED 2 | 1156 (| 0 1715 | 2 0 4 4 0 | 1 11 | *D FAT | 2 5052 | 11 |

20.10 25.70 3.91F **BUTTER** 3.1156 1.5803 0.1678 1.4125 **↓↓** *N.FAT YEAR AGO 16.53 NFDM 1.3984 16.89 *OTHER 17.08 16.35 17.60 3.88F 18.40 3.84 *DRYWHEY 0.4902 0.2911 0.2998 0.1991 CATTLE - DAIRY PURPOSES(\$/HD) NORTHEAST (Avg. Oct. 14, 2022 sale New Holland, PA) Fresh Bred Springing *HEIFERS: Bred Springing Beef x Open: 300-600 lbs Beef X 600-900 lbs Beef X 900-1300 lbs BULLS(900+ lbs) 1460 1100 1560 1270 1545 1500 600 625 1000 985

TWO WEEKS AGO COMPARISON 1325 1230 1400 N/A 1400 N/A 465 N/A 750 N/A N/A N/A Avg. of prices reported by USDA Market Ne FED HOLSTEIN STEERS (\$/CWT LIVEWEIGHT) CURRENT Beef X **WEEK AGO** YR AGO Price PA Auction Markets Oct. 6-11, 2022

CULL MARKET COWS (\$/CWT LIVEWEIGHT Choice & Prime 1250-1550 lbs light test 115.60 98.25 110.35 100.00 295.00 120.00 225 75.00 П **BULL CALVES:** No. 1 & 2, 90-130 lbs **Premium White Breakers** Boners 100.00 55.00

81.5011 76.0011 70.2511 Average to high dressing 77 85 69 10 N/A 86 00 **Dairy** EXCELLENCE YEAR AGO 55.50 46.60 N/A 70.85



