MPC WEEKLY FRIDAY REPORT

\$1.8240

DATE: OCTOBER 22, 2021

To: DIRECTORS & MEMBERS

FROM: KEVIN ABERNATHY, GENERAL MANAGER

PAGES: 5

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NATIONAL PLANTS



\$1.3427 14.370.460

MPC FRIDAY MARKET OPDATE											
CHICAGO CHEDDAR CHEESE			CHICAGO AA BUTTER			NON-FAT DRY MILK					
Blocks	+ \$.0300	\$1.8100	WEEKLY CHANGE	+ \$.0600	\$1.8350	WEEK ENDING 10/16/21					
Barrels	+\$.0725	\$1.8625	WEEKLY AVERAGE	+ \$.0315	\$1.8105	NAT'L PLANTS	\$1.3548	17,360,347			
WEEKLY AVERAGE CHEDDAR CHEESE			DRY WHEY		D						
Blocks	- \$.0210	\$1.7640	DAIRY MARKET NEWS	W/E 10/22/21	\$.5675						

MDC EDIDAY MADVET LIDDATE

CALIFORNIA FEDERAL MILK MARKETING ORDER PRICE PROJECTIONS

W/E 10/16/21

\$.5406

PRICE PROJECTIONS	CLASS I ACTUAL (RANGE BASED ON LOCATION)	CLASS II PROJECTED	CLASS III PROJECTED	CLASS IV PROJECTED	
OCT 22 EST	\$18.68 - \$19.18	\$17.09	\$17.87	\$17.05	
LAST WEEK	\$18.68 - \$19.18	\$17.03	\$17.94	\$17.05	



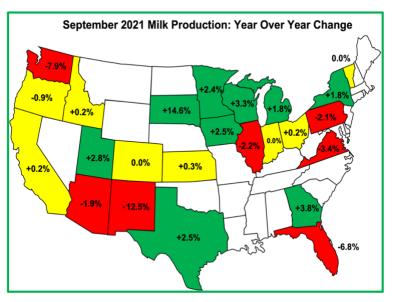
Barrels

Milk, Dairy and Grain Market Commentary

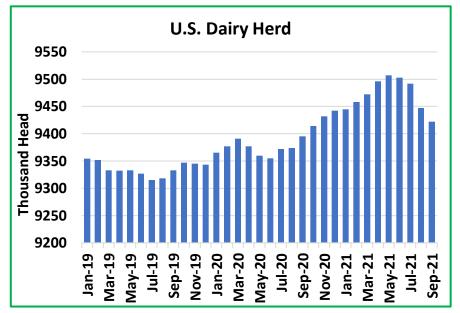
By Monica Ganley, Daily Dairy Report <u>Monica@DailyDairyReport.com</u>

Milk & Dairy Markets

USDA's Milk Production report, released Wednesday, suggested that national milk supplies are growing at a slower rate than many analysts previously believed. According to the report, milk production grew by just 0.2% year over year in September, rising to 18.075 billion pounds. This represents the slowest growth since May of last year when the pandemic was sending shockwaves through the industry, and producers were directed to drastically cut production. Previous month estimates were decreased as well. August milk production, which was originally estimated as up 1.1% year over year, was reduced to a 0.6% increase in the September report.



NAT'L PLANTS

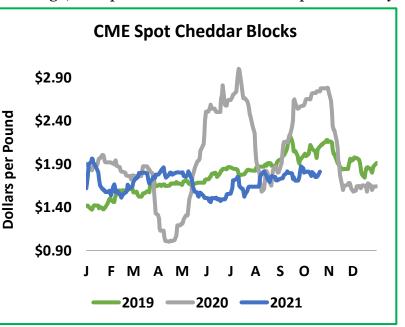


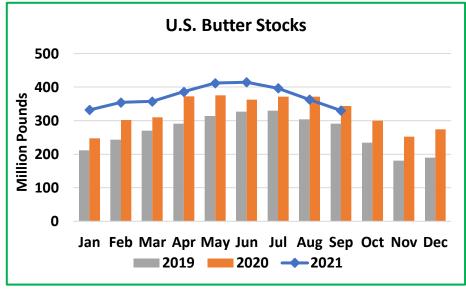
Most of the slowdown was due to a decline in the national milking herd. Cow numbers dropped by 25,000 head between August and September, the fourth marking consecutive month of contracting cow numbers. Revisions played a key role in cow numbers as well. USDA revised downward the August herd size estimate by 33,000 head. Despite the consecutive declines, at 9.422 million head in September, the national dairy herd remains 27,000 cows larger than at the same time last year. Yields remained virtually unchanged in September compared to prior year.

Lighter milk supplies have likely helped to keep upward pressure on the markets this week as all spot products finished the week higher than last Friday. In the Cheddar markets, despite giving up 3¢ during Monday's spot trade, blocks added a penny on Thursday and a nickel on Friday to end the week at \$1.81 per pound, up 3¢ from last week, though only one load moved. Barrels demonstrated a bit more action, ending Friday's session at \$1.8625 per pound, up 7.25¢ from last week with 19 loads changing hands. The block-barrel spread stretched as wide as 10¢ on Thursday before narrowing to 5.25¢ on Friday. Cheesemakers are running busy schedules but continue to be plagued by labor and logistical challenges. Despite the headwinds, cheese inventories built significantly during September, rising to 1.46 billion pounds by the end of the month and setting a new monthly record.

Whey markets have become increasingly enticing and USDA's Dairy Market News suggests that some cheesemakers are producing generic, non-specification cheeses to get access to the whey stream, particularly for use in higher protein products. Market stakeholders describe robust interest from both domestic and international buyers, though sustained port congestion is preventing whey from moving offshore as quickly as exporters would like. In Chicago, the spot market took a small dip on Tuesday

before moving convincingly upward on Thursday and Friday to end the week at 61.75¢ per pound, up 1.5¢ from last Friday. Though prices still have far to go to break the 70¢ barrier and set a new record, market tones are firm. The fat market was a bit less settled this week as butter prices jostled to and fro. Demand for butter is purportedly strong with most churns anticipating a strong holiday season. However, most market participants also describe inventories as sufficient to meet buyers' needs. Butter stocks declined seasonally during September, falling by 9% versus August to 330.1 million pounds. At the CME, spot butter prices moved up on Monday before shrinking on Tuesday in an active trading day where 13 loads moved.



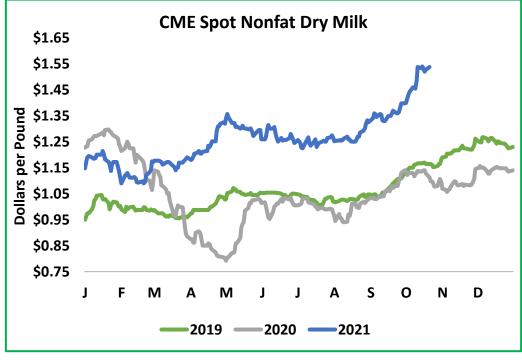


Prices found traction on Wednesday and Thursday but ended the week by giving up a penny on Friday. After the dust settled the spot butter price finished Friday's session at \$1.835 per pound, up 6¢ from last week with a total of 30 loads trading hands.

After headlining the dairy markets recently, movements in the nonfat dry milk (NDM) market were more subdued this week. Nevertheless, the market retained a strong tone, setting a new seven year high on

Monday at \$1.54 per pound, before retreating modestly in the middle of the week. Gains on Thursday and Friday delivered a final price of \$1.5375 per pound for the week, a half cent higher than last Friday's close. Though some customers are balking at the higher prices, demand remains robust, especially from international sources. Dairy Market News reports that exports to Mexico are moving at a steady clip. While procuring drivers can be a challenge, moving product south of the border at least allows exporters to avoid the pileup at the ports.

The action in the spot markets later in the week worked to push the futures markets for milk upwards. Activity in the Class III market was mixed early in the week, but convincing gains on Thursday left most contracts higher than last settlement Friday's and above their Class IV counterparts. Class IV futures perked up on Monday but found resistance on Tuesday and Wednesday. Recovery on Thursday Friday and delivered modest gains across the board compared to last Friday's settlements.



Grain Markets

Corn futures were seemingly on a seesaw this week with alternating sessions of increases and declines. Gains on Monday, Wednesday, and Friday were counteracted by drops on Tuesday and Thursday. The soybean markets were more consistent with gains during the first half of the week only somewhat undermined by losses on Thursday and Friday. Feed costs remain elevated for dairy producers and are likely one of the key factors that is putting pressure on milk production.

OPEN ET Has Launched



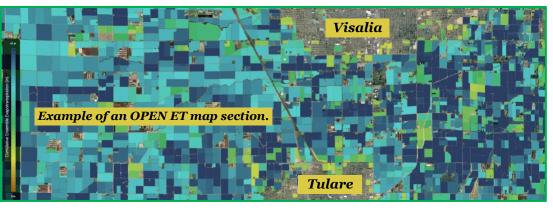
By Geoff Vanden Heuvel, Director of Regulatory and Economic Affairs <u>Geoff@MilkProducers.org</u>

It may not mean much at first glance, but a consortium of entities including NASA,

The U.S. Geological Survey, USDA, as well as a number of academic institutions and NGO's in conjunction with Google Earth, have produced this powerful web-based information platform that allows you and the world to see how much evapotranspiration (ET) is coming off of YOUR fields. The website address is: <u>https://openetdata.org/</u>

I signed on this morning. It is free to create an account and there are some short videos that explain how to use the tool. They also explain ET. Evapotranspiration is the description of what water molecules

escape from the land in the form of vapor. This vapor is invisible to eye but can be picked up by satellites and tied back to the field from which it came. ET is not exactly the same as groundwater pumping because the source of the water may be precipitation, or



surface water application. But if you know how much water came from precipitation and how much water came from surface supplies and subtract it from the total ET that came off the field, the remaining amount can be safely assumed to have come from groundwater.

What I found on this website is a map that can be zoomed in to the parcel level. You can put the pointer on a specific parcel, and it will tell you how much ET came off the field during the time frame you choose and what USDA says is growing on the field. There is annual data for years 2016 through current. Interestingly, there is no ET from dairy footprint parcels. This is a problem with the ET technology because of the nature of water usage on a dairy getting meaningful ET data from a dairy footprint is difficult. It is clear the OPEN ET database omits information from those parcels.

There are many GSAs with dairies in them that are currently using ET data to track water consumption. Semitropic Water Storage District, Pixley Irrigation District, Lower Tule River Irrigation District, Madera County GSA, both the Madera Subbasin portion and the Chowchilla Subbasin portion, are using ET data in their landowner allocation programs. Recently, Mid Kaweah GSA and Greater Kaweah GSA and East Kaweah GSA announced that they will be implementing an allocation program using ET as a measurement tool. All these GSAs have contracted with private companies that use the ET satellite data but then ground truth that data by using localized weather stations that adjust or interpret those satellite readings to account for the situation on the ground. There is one company, Land IQ, that is doing most of this work. Obviously, they have responded to the roll out of Open ET with some information sheets that answer questions about how the two systems compare. You can access that information here:

- Land IQ Frequently Asked Questions
- Land IQ Comparison of Land IQ and Open ET

The Open ET numbers appear to be higher than the ET numbers generated by Land IQ using their ground truthing tools. While ET data is a critical part of the picture on developing a Groundwater Sustainability Plan (GSP), it is important to remember that ultimately the GSPs use groundwater level data to determine whether their plans are achieving the elimination of "undesirable results". So, a big development this week in the long road to groundwater sustainability.

By the way, Open ET does not just cover California. Their data set includes all 17 Western U.S. states, so you can see how the guys in Texas and New Mexico and South Dakota, Colorado and Kansas are doing as well. The presence of this technology is attracting national attention that may not be favorable to agriculture, such as the article featured below.

Satellites Reveal the Secrets of Water-Guzzling Farms in California Courtesy of National Public Radio (NPR)

In a new push to stop further depletion of California's shrinking aquifers, state regulators are turning to technology once used to count Soviet missile silos during the Cold War: satellites.

Historically, California's farmers could pump as much as they wanted from their wells. But as a consequence of that unrestricted use, the underground water table has sunk by hundreds of feet in some areas, and the state is now trying to stabilize those aquifers.

Regulators need to calculate just how much



water each farmer is using across California's vast agricultural lands, and scientists and private companies are now offering a technique that uses images from orbiting satellites. "The days of agricultural anonymity are over," says <u>Joel Kimmelshue</u>, co-founder of the company <u>Land IQ</u>, which is helping to hone the technique.

Read the full article by Dan Charles of NPR <u>here</u>.

