CURRENT TRENDS AND CHALLENGES FOR THE WESTERN DAIRY INDUSTRY

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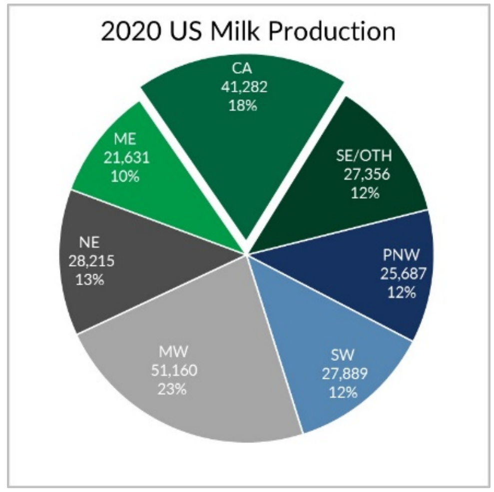
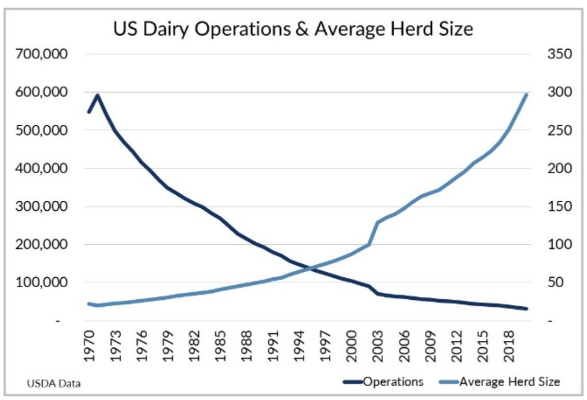
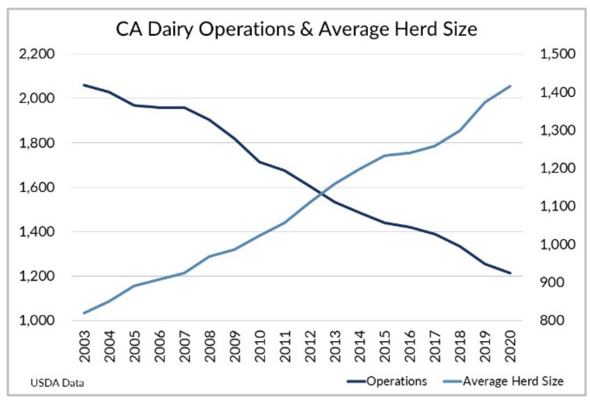


California continues to hold its number one ranking in US milk production. In 2020, the state produced just shy of 20% of the nation's total output and surpassed the #2 ranked state (Wisconsin) by 10.6 million pounds. California's weather, infrastructure and favorable geography bode well for establishing the state as a dairy powerhouse.

However, the state is no longer in growth mode. Some of the consolidation is consistent with national trends – that is, fewer operations with more cows. The drive towards efficiency is evident no matter where the dairy is located. California's herd size (at just over 1,400 cows) is much larger than the national average of 300 but consistent with other Western States such as New Mexico (2,357 cows), Texas (1,653) or Idaho (1,466).





Though its ranking as the top dairy production state is far from threatened, California has experienced some retreat. Higher feed costs and stricter environmental regulations are, in part, to blame.

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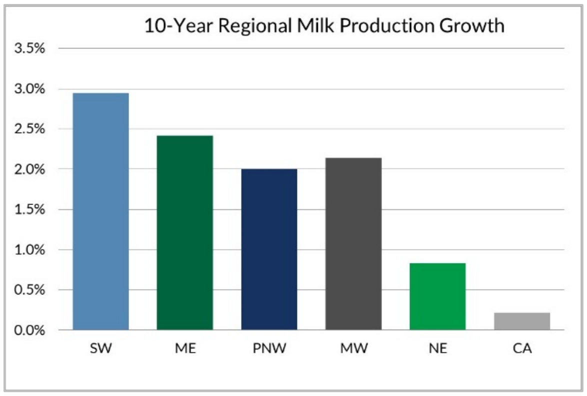
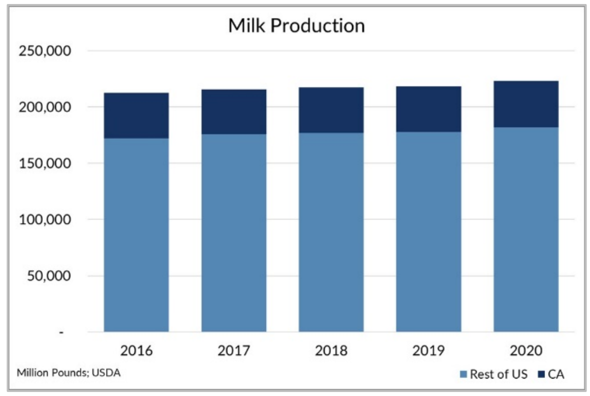
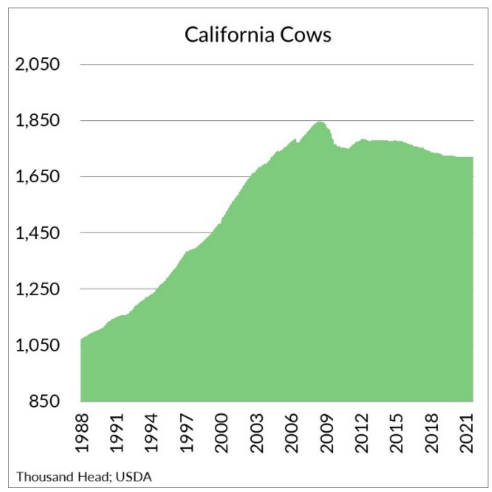
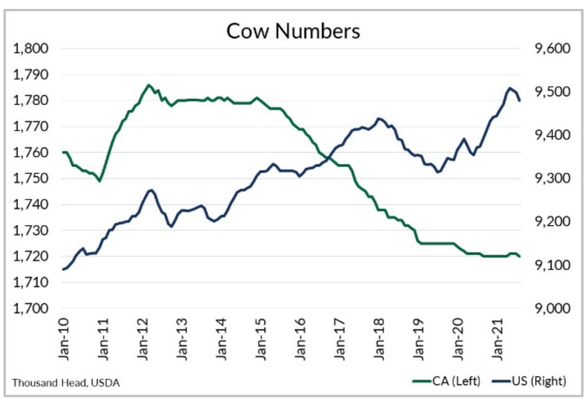




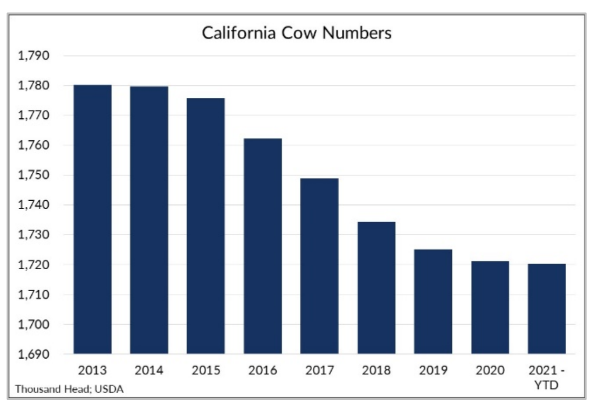
In fact, California's growth rate over the past ten years (at just 0.22%) is far less than other producing regions such as the Southwest (AZ, NM and TX) at nearly 3% or the Mideast at 2.5%.

For two decades between 1988 and 2008, the state added over 760,000 cows. Indeed, cow numbers in California hit a peak of nearly 1.85 million head in 2008. After several years of ups and downs following 2008, the milking herd has largely been declining since 2014. This is inconsistent with the national trend which has seen a growth in overall cow numbers during the same time frame.





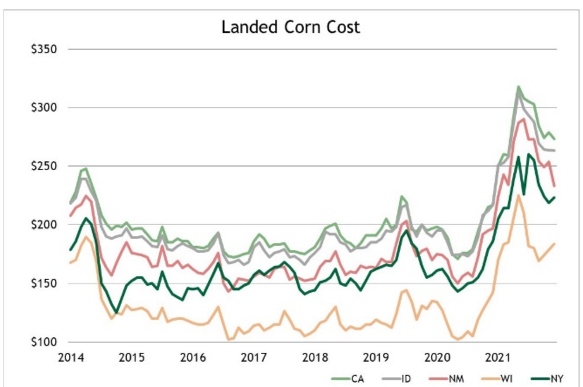
Stringent environmental regulations in California (covered below) have no doubt put pressure on the industry. Some attrition can also be attributed to lack of interest by the "next generation" as many producers have noted a decline in their children returning to the dairy, leaving retirement as the best option. Urban encroachment has likely sped up consolidation in some areas like Southern California and the North Bay. Skyrocketing land values across the state has also pulled acreage towards higher valued crops such as tree nuts. Due to high land values, the returns associated with growing alternative crops have become more and more enticing. As a result, many dairy producers have converted a portion of available farmland into crops

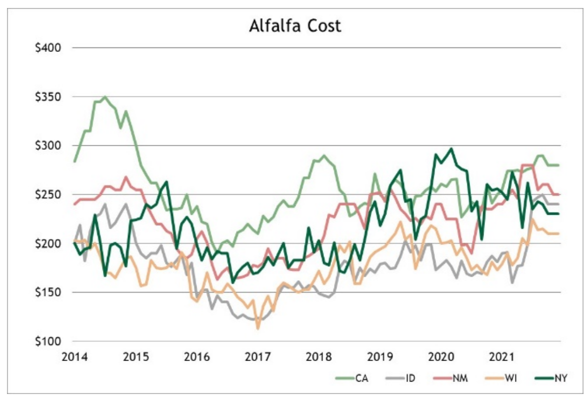


including almonds, walnuts, or olives. This creates a conundrum of sorts: cropland converted to trees is no longer available to grow forage for cows, working against the ability to become less dependent on outside purchased feed. At the same time, diversification allows for an on-farm “hedge” against potentially volatile milk markets. During periods of low milk margins, potential revenues from the other crops can help keep the overall operation afloat. Lenders seem keen on the approach as well.

Another major factor is margin squeeze prompted by higher feed costs in the state. California producers are typically more susceptible to rising grain prices as there is a heavier reliance on outside purchased feed (that is different for many operations in the Midwest who grow much of their own feed and may even have additional to sell). Given its distance to major feed growing regions, California producers typically pay the highest landed feed prices of all major US dairy regions. This is a situation only further exasperated by a multitude of supply chain snarls prompted by the pandemic. These ongoing issues have local basis figures running high, adding even further to the costs of grains as represented in the futures markets.

On top of higher transportation costs, the base price of corn and protein have also increased rapidly over the past year. Demand has been solid (especially from China) and hits to crops in other growing regions (like Brazil) have current balance sheets tight. The outcome of the 2021 harvests will be key to California producer margins in the year ahead.





Estimates via margin models such as the Dairy Margin Coverage program (DMC) show at current futures levels for corn and soybeans, feed costs in the second half of 2021 could be up an estimated $2.00 per hundredweight from 2020 if current levels hold. This is a rough, national estimate and can certainly run higher for Western dairies given many factors surrounding local markets and transportation. On top of grain markets, prices for alfalfa and silage are also of concern given the drought impacting parts of the West.

Environmental issues are a significant challenge for dairies operating in California. This has been a factor in the decline in the number of dairies and dairy cows in California noted above. It has contributed to higher costs of production and frustration with understanding and complying with a myriad of laws and regulations. However, the industry has also come to understand this and has found ways to streamline compliance to reduce the cost, risk, and frustration of doing business in California. Here we focus on two examples where seemingly insurmountable obstacles drove ingenuity to develop manageable solutions or even opportunities.

California is on a mission to tighten its belt on greenhouse gas emissions. This has posed a challenge to businesses to reduce their carbon footprint, while continuing to do business in a high-cost state. In 2016 the state legislature decided that dairy cows needed to do their part in the state's fight on climate change and proposed legislation to reduce methane emissions coming from cows. Western United Dairies (WUD), and others in the dairy industry, worked with legislators to improve the legislation. The legislation that was implemented requires livestock and dairy operations to reduce their manure methane emissions by 40% by 2030. WUD then went to work to find funding to achieve that goal. Because the state is serious about meeting the goal, it has allocated $369 million dollars to help meet the target. Dairies have used that funding to upgrade their facilities and diversify their revenue streams with dairy digesters, turning lemons into lemonade.

The other big challenge has been water quality. Dairy leaders have worked with other industries, stakeholders, and the Central Valley Regional Water Quality Control Board to develop an alternative water quality regulatory structure in the Central Valley Salinity Alternatives for Long Term Sustainability (CV-Salts). Under this new structure that was recently adopted, facilities with water quality permits will fund safe drinking water for those whose water quality does not meet standards in return for more time to find solutions to the water quality issue. A livestock organization that was originally established to help dairies comply with the groundwater monitoring requirements of their permit, the Central Valley Dairy Representative Monitoring Program (CVDRMP), is now also helping to streamline and keep the costs down on that process. This has also created room for partnerships to help address the water quality issue. The California Department of Food and Agriculture (CDFA) has recently announced the creation of the California Manure Recycling and Innovative Products Task Force, which will look for solutions to create value added manure-based fertilizers and soil amendments. Perhaps even for use by those who grow forage crops attending this conference. This will help dairies export nutrients to other farmers who are looking for a source of local nutrients and soil amendments to improve their yields and soil health.

California dairy producers are extremely resilient. However, given the many pressures outlined here, we expect to continue to see consolidation in the industry in the year ahead. There are already numerous reports of sell-outs and financial stress in the countryside. For those who weather the current storm, a continued drive towards efficiency, diversification, and environmental stewardship will no doubt continue to be the theme. Over the longer-term: the variety of challenges facing the state's industry will work to curb large-scale expansion. That said, there is little to suggest a major step backward in total milk supply. Consolidation will continue and the areas of the state that have faced attrition will likely see more. Still, in any case, California will be home to an abundant milk supply.