



AGRICULTURE

INDUSTRY INSIDER

2023



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CONTENTS

- 4. EXECUTIVE SUMMARY
- 6. MOODY'S INDUSTRY ANALYSIS



EXECUTIVE SUMMARY

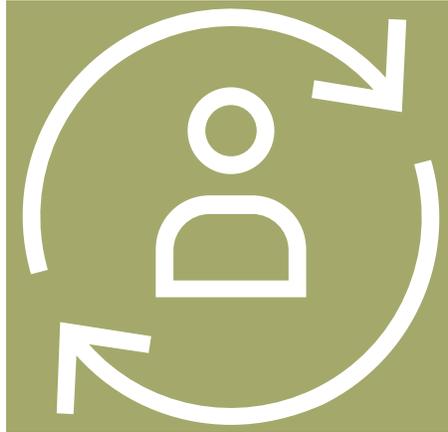
December 2023

The Sonoma County Economic Development Board (EDB), in partnership with the Workforce Investment Board (WIB), is pleased to present this 2023 Local Industry Insider Report. For additional information, questions, comments, or suggestions, please contact us at (707) 565-7170 or visit www.sonomaedb.org.

HIGHLIGHTS



The 2023 winegrape harvest season is a bright spot for Sonoma County's agriculture industry. Following years of extreme weather challenges, the 2023 growing season brought a cool summer and early rains. This pushed harvest back by a month and forced many grape growers to condense what is a 2 month process into a 30 day frenzy to harvest before the November rain. Early reports from this season are optimistic, with growers believing they may come close to the region's record harvest tonnage. This year's weather conditions favored certain varieties, such as Chardonnay, which have produced lower yields in recent years. The grape harvest from this year should balance the market after consecutive years of smaller than expected yields.



Dairy producers suffered the past few years. The value of livestock and poultry decreased by a third this year, which may be due to a reduction in milk production. The quality of feed was depleted by the combination of drought and heavy rains, resulting in lower milk production rates per cow. The dairy market is the second largest agricultural product by value in Sonoma County, and it bore the brunt of the negative externalities brought on by drought related conditions. This, in tandem with shrinking demand for dairy products and the rise in alternative milk's market share, may explain the USDA's projection of lower milk prices in 2024. Coupled with improved drought conditions, milk production should increase over the next two years while prices modestly tick downward.



For the first time in years, California's reservoirs are filled and no area in the state is deemed to be in a drought. This has allowed for slight recovery this year to certain sectors of the industry. In the near term, high interest rates may also impede growth, as plans for expansion or major equipment purchases may be held off until rates begin to ease. This will suppress profit margins, but interest rates are projected to retreat in mid to late next year. Oil prices are expected to maintain steady, and, currently, even the most volatile of farm inputs remain below pre-pandemic levels. Although the Sonoma County's agriculture industry has proven resilient, it faces further challenges as the effects of the climate crisis begin to manifest in more extreme weather conditions and natural disasters.



Recent Performance. Sonoma County's agriculture industry had a difficult 2022, per the latest Sonoma County Crop Report, although conditions seemingly improved in 2023. Drought conditions that worsened significantly throughout 2022 forced Sonoma County farmers and growers to grapple with the availability of dwindling water supplies and raised costs for local producers. According to the 2022 Sonoma County Crop Report, the total value of crops produced in the county decreased around 2%.

Production across different crop varieties was mixed in 2022. The important winegrape growing season was a bright spot despite dealing with similar challenges of heat waves and water availability. Further complicating harvest season was the timing of heat waves and spring frosts, which led to an earlier-than-expected start to harvest season. As a result, total winegrape volume slipped compared with 2021, but light harvests in previous years, coupled with a quality harvest and still-strong demand from the wine industry, helped propel the average value per ton to an 11% increase. According to the California Grape Crush Report, winegrape values in Sonoma County rank second among all counties in the state, behind only Napa County.

On the other hand, dairy producers suffered through a much more difficult 2022. The value of livestock and poultry products decreased by nearly a third compared with a year prior, with production down 50% despite a sizable increase in prices per unit. Dairy farmers reported a significant reduction in milk production per cow, which caused the steep decline. Additionally, variable weather patterns, including significant drought conditions followed by heavy precipitation later during 2023, have depleted the quality of the feed.

Macro drivers. The U.S. economy is hanging tough. Growth in the just-ended third quarter was solid, bordering on robust. Annualized real GDP appears set to come in at more than 3% and could be closer to 4%. Average monthly job growth in the quarter was well over 250,000, and the job gains remain broad-based across most industries.

The economy's strong performance is arguably due most fundamentally to stalwart consumers who remain steadfast in their spending. Consumer spending, hit hard by the pandemic, recovered quickly with government support and has been growing at a pace consistent with pre-pandemic trends. Consumers have done an admirable job calibrating their spending. They spend just enough to power growth and allow the economy to avoid recession but not so much that it juices up inflation. Facilitating this

is the excess savings households accumulated during the pandemic. Lower- and middle-income households received substantial government support during the pandemic. They were able to save some of that, at least for a while. Higher-income households saved much more as they sheltered in place.

We estimate there was almost \$2.5 trillion in excess savings at the peak in fall 2021. Consumers have drawn down those savings since, in significant part to help prop up their purchasing power, which has come under severe pressure from the high inflation. Inflation costs the typical household earning the median income \$734 more each month to buy the same goods and services it purchased two years ago. Lower-income households have been especially hard-hit and have largely exhausted their excess savings, but high-income households together still have what we estimate at nearly \$1.2 trillion in extra savings in their accounts.

While consumers have the wherewithal to maintain their spending, at least in aggregate, whether they do so also depends on their confidence. If consumers lose faith that they will retain their jobs and paychecks, they are sure to pull back on spending and the economy will falter. Historically, when confidence as measured by the Conference Board's monthly survey of consumers falls sharply for several months, consumers curtail their spending and the economy soon suffers a downturn. But so far so good. Consumer confidence is holding firm near its long-run average.

Despite many considerable challenges, consumers have remained resilient spenders—and thus a reliable firewall between continued growth and recession. There are good reasons to think the firewall will hold; consumers will continue to do their part and the economy will skirt a downturn. But there is also good reason to remain cautious. That consumer firewall remains under significant pressure.

Industry drivers. While extreme drought conditions weighed on the agriculture industry's performance in recent years, there is at least some good news on that front. Water-supply issues will be nonexistent this year for the first time in years, as the state's reservoirs were replenished to levels far above their historical average. Moreover, there have been broad reductions in drought coverage and intensity across the state. According to the U.S. Drought Monitor, less than 5% of the state is even in the lowest category of dryness, and no part of California is in drought. This marks a stark comparison to even early last year, when large portions of the state were facing persis-

tent and severe drought conditions that forced farmers to cut back on livestock size and fallow significant portions of farmland.

With interest rates expected to remain elevated until the Federal Reserve begins to cut rates in mid- to late 2024, Sonoma farmers will be forced to grapple with these higher interest rates and may hold off on expansion plans or new equipment purchases until the future path of rates is more certain. The agriculture industry often relies on long-term loans for large capital investments such as land, machinery and buildings. For instance, a farmer might take out a mortgage to buy more land or a loan to purchase new equipment. Higher interest rates will make these loans more expensive, which will discourage investment and potentially lead to a decrease in productivity. In addition to long-term loans, the agriculture industry also frequently uses variable rate loans. These are loans in which the interest rate can change over time, usually in line with a benchmark interest rate. When interest rates rise, the cost of these loans can increase drastically.

Across the agriculture crop and product spectrum, there are a variety of headwinds. The dairy market, which is Sonoma County's second-largest agriculture product by value, bore the significant brunt of the drought-related conditions, which forced many Sonoma County and statewide farmers to pull back on milk cow numbers, which are down on a year-ago basis as of September. Milk per cow is also down 0.3%, according to the USDA's quarterly milk production report. Overall year-to-date milk production through September in the U.S. is roughly unchanged from the same period a year ago; falling prices are owed mostly to market conditions, where demand for milk alternatives is surging. The USDA projects that milk prices will sink slightly lower in 2024 even as milk production ekes higher, averaging about 15% lower over the next two years.

Cool weather through the summer and above-average rainfall delayed the grape harvest in 2023. This pushed back the harvest season by roughly a month and forced many grape growers to condense what is usually a two-month process into a shortened 30-day frenzy to harvest before the November rains. Early reports from the 2023 harvest season are optimistic. While official tonnage totals will not be compiled until early 2024, individual harvesters are reporting a significant increase compared with prior years and may even come close to the region's record from 2018. Regardless, the tonnage totals are encouraging, especially for specific varieties such as chardonnay, which have suffered from light yields in recent years.

More volatile climate conditions will be an ever-present challenge for Sonoma County vintners and agriculture producers. Rising ocean surface temperatures have coincided with less-predictable climate events that could put county vineyards and farmland in danger. Vintners are experimenting with different grapes that grow better in hotter conditions, and harvest seasons are moving earlier in some places in response to changing climate conditions.

Pricing. California's larger grape harvest in 2023 should balance the market after consecutive years of smaller-than-expected crop yields. According to the California Grape Crush Report, grape prices per ton increased about 7% in 2022 after surging 25% in 2021. These increases are likely to give way given earlier reports of a strong harvest this year. More available supply will keep a speed limit on price increases, though the quality of the harvest will ensure that prices do not decrease.

The county's other largest agriculture product will similarly see a retreat in pricing power. After peaking in mid-2022, milk prices declined sharply and are only now beginning to rebound. Milk prices now sit only slightly higher than their pre-pandemic level, which is still significantly lower than their highs from nearly a decade ago. U.S. and global demand for nondairy alternatives continues to rise and chip away at market share of the dairy market, which will limit price increases for Sonoma County dairy farmers. Coupled with improved drought conditions that should see milk production in California increase over the next two years, this suggests that milk prices will modestly tick downward this year and next.

Operating expenses. More modest increases in grape prices will help offset the sting of strong wage growth. Wage and salary disbursements to California agriculture workers rose 4% in 2022, mirroring the previous year's growth rate. The labor market has proven resilient this year, and workforce shortages are apparent throughout the agriculture industry, which has led to sustained increases in wage growth to compete for a scarce pool of workers. These will persist in the near term, albeit at a slightly reduced pace as the labor market loosens and job growth slows over the next year.

Beyond labor expenses, Sonoma County agriculture producers will see some respite because of lower energy costs. Oil prices, which peaked in mid-2022 at more than \$100 a barrel, are now hovering near \$80 per barrel and are forecast to hold steady in the next few years. Other input prices are a mixed bag. Fertilizer

prices, which move closely with natural gas prices, are far below levels seen during the past two years and close to their pre-pandemic average. Dairy cattle feed prices have likewise pulled back in recent months, though both these are volatile and have swung rapidly over the past year.

Profitability. Sonoma County agriculture producers' profitability will weaken slightly given lower prices from the county's key agricultural products, but the overall macroeconomic environment will help safeguard profit margins. Though there remains a lot of uncertainty in the economic outlook, the forecast calls for the U.S. to avoid a recession. High interest rates will increase interest expenses and likely delay expansion plans and capital improvements for vintners and agricultural products. This will likewise suppress profit margins until interest rates begin to retreat, beginning mid- to late next year.

Vintners' profit margins will vary based on the quality of the individual harvests and which portion of the wine segment they cater to. Overall wine sales are beginning to level off, but premium wine sales are posting solid growth. This ensures profit margins for high-quality grapes and wines will hold up better than those in the bulk segments, especially given the large harvest this year. Wine buyers have mostly bought the excess grapes beyond their contractual maximums, but this will ensure more discounting occurs.

Long-term outlook. Sonoma County's agriculture industry has proven resilient in recent years, persevering through difficult climate conditions and the COVID-19 pandemic. While drought conditions are vastly improved relative to the last few years, the prospects of further climate disruptions remain at the forefront and are a key risk to the outlook. The harvest seasons this year appear to be in better shape, but long term, there is tremendous risk associated with more variable weather patterns that could undermine the outlook. According to the Environmental Working Group, payments made to California farmers from the Federal Crop Insurance Program due to extreme weather events have totaled some \$3 billion during the last two decades, while payments across the five weather-related causes of crop losses have more than doubled since 2001. Climate change can lead to changes in temperature and precipitation patterns, which can then affect the growing conditions for crops. For example, higher temperatures can increase evapotranspiration, reducing the amount of water available for crops. Changes in precipitation can lead to either drought or flooding, both of which can hurt crop yields.

As millennials overtake Generation Xers and baby boomers as the largest wine-consuming cohort, sales of fine and premium wines will slow from the brisk pace of the past four years, which will make a more difficult selling environment for Sonoma County's grape growers. Winemaking remains the beating heart of Sonoma County's agriculture economy. Grapes grown in Sonoma County are bested only by Napa County when it comes to price per ton, and the county's reputation and terroir ensure that this is a long-lasting advantage over other winemaking regions. Still, vintners will need to do better with millennials to ensure a healthy base of demand in the long run. As millennials enter their prime spending years, they will wield significant purchasing power as their careers progress. Shifting consumer preferences are also affecting the large dairy industry, though the shift toward nondairy milk sources appears to be slowing marginally. Still, dairy is clearly ceding market share to nondairy and plant-based alternatives; this bears watching in the coming years and could threaten the long-term outlook for Sonoma County's dairy producers.

Upside risks. Decades-high inflation and policy tightening by the Fed to bring it down will weigh on consumer spending. Nevertheless, the insatiable U.S. consumer has thus far been surprisingly strong. The baseline forecast could again underestimate consumer spending, which would result in faster growth. The labor market is loosening but remains tight, keeping job and income growth elevated. Businesses, correctly, are calculating that the labor-supply issues in the aftermath of the pandemic are here to stay. This is leading them to retain staff despite slowing demand. This dynamic could push household income up faster than expected. As much of the income is spent, the economy would grow above expectations, which would benefit Sonoma County's agriculture producers if consumer spending comes in above expectations.

Downside risks. Climate change remains a particularly important downside risk for Sonoma County's wine industry. Another severe drought or wildfire could deal a more serious blow to vines and production facilities. The California wildfire season is getting progressively longer; as a result, insurers are growing hesitant to shield county businesses against wildfire risk given the enormous losses suffered in recent years.

Colin Seitz
November 2023

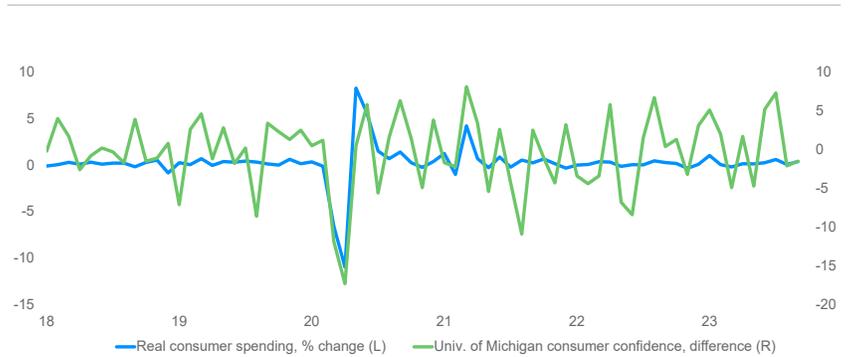
The University of Michigan consumer sentiment survey is advancing in fits and starts, but consumers are still spending at a solid pace. With progress being made on the inflation front—and recession chatter slowing giving way to more confidence in a soft landing for the economy—consumers are feeling slightly more upbeat. The labor market and consumers are proving resilient and will keep the economy humming, albeit at a slower pace throughout 2024.

Sonoma County's agriculture industry has gained some momentum in recent years, though payrolls have roughly held steady since 2005. Less-restrictive immigration policies are helping ease labor supply challenges, and improved drought conditions will provide some much-needed respite for Sonoma County farmers who have struggled through historic drought conditions for most of the past five years.

Sonoma County dairy farmers faced a double-edged sword of falling milk prices and sky-high input costs due to the surge in fuel prices in 2022, but prospects are brighter for 2024. Milk prices have pressed higher in recent months, but these are likely to stabilize as production improves throughout the year. After a tough last year and change, prospects are brighter given these abating headwinds.

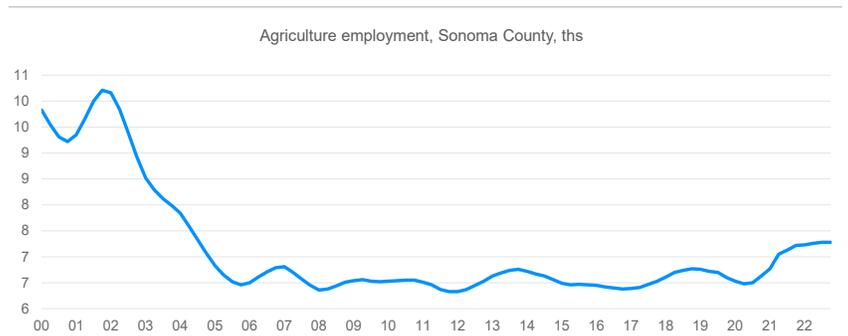
Lower fuel costs will be a boon to agriculture producers in Sonoma County. After surging in mid-2022 following the Russian invasion of Ukraine, the oil market has since corrected, and strong U.S. production is helping to bring more supply to the market. We expect oil prices to remain in the current \$80-to-\$90 per barrel range through next year, which will help keep input costs for agriculture producers much lower than they have seen in the past two years.

Glum Consumers Still Spend



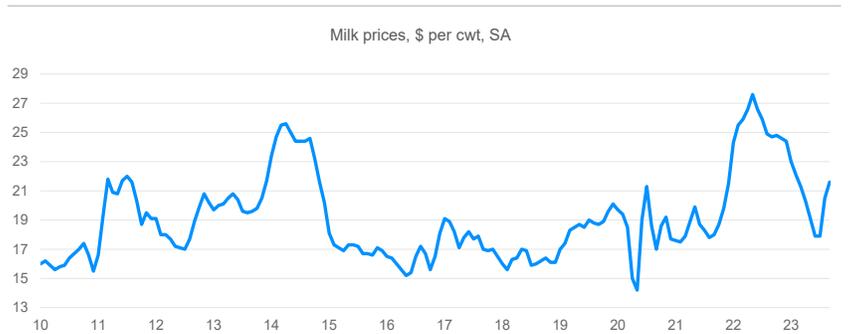
Sources: BEA, Univ. of Michigan, Moody's Analytics

Agriculture Payrolls Have Found Momentum



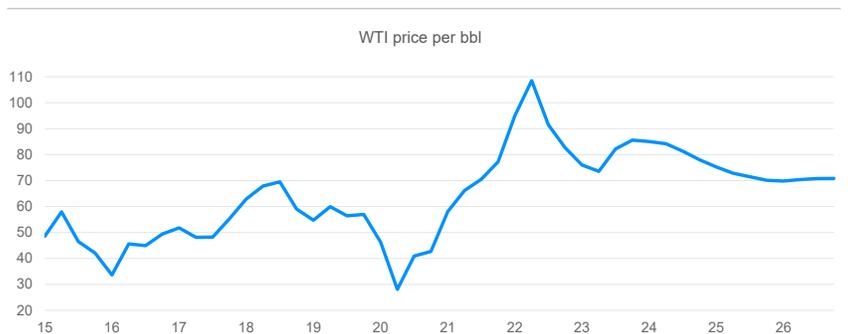
Sources: BLS, Moody's Analytics

Milk Prices Beginning to Rebound but Will Stabilize



Sources: USDA, Moody's Analytics

Oil Prices Will Recede



Sources: EIA, Moody's Analytics





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