



Impact of COVID-19 on Dairy Margin Coverage and Dairy Revenue Protection Projected Indemnities in 2020

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Executive Summary

Due to impact of COVID-19 and public health measures taken by U.S. federal and state governments, U.S. dairy commodity prices have plummeted during March 2020. Dairy Margin Coverage (DMC) enrollment at \$9.50/cwt coverage level for 2020 is 28.3 billion pounds. Expected payouts for 2020 are \$497.9 million. Under Dairy Revenue Protection (DRP), total declared covered milk production for calendar year 2020 as of April 4, 2020 is 42.3 billion lbs, and total expected indemnities are \$906 million. Forced milk dumpage expected to occur in April due to decimated export and foodservice demand could reach up to 10% of total U.S. milk production and could considerably widen the basis between the mailbox milk price and the revenue floor set by DMC and DRP. Dairy industry representatives have requested intervention measures that would compensate producers for dumped milk. Such programs would preserve the effectiveness of risk management programs and encourage dairy producers to rely on risk management programs against future unexpected market shocks.

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Dairy Margin Coverage

Dairy Margin Coverage is the cornerstone dairy safety net authorized under the Agriculture Improvement Act of 2018. U.S. dairy producers can protect up to 5 million pounds of their production history at coverage levels up to \$9.50/cwt, at very affordable premium levels (Novakovic and Stephenson, 2018; Newton, 2019; USDA Farm Service Agency, 2020). For calendar year 2020, total Tier 1 covered production history at coverage levels of \$4.50/cwt and higher is 28.8 billion lbs, of which 28.2 billion lbs are protected at \$9.50/cwt. Total covered production history at the \$4.00/cwt coverage level is 72.3 billion lbs. As of April 3, 2020, average expected DMC margin for 2020 is \$7.94/cwt, and the lowest margin is expected for May 2020 at \$5.62/cwt. Expected payments for April, May, and June 2020 are \$58.0, \$91.6, and \$89.0 million respectively. Total expected DMC payments for 2020 are \$497,934,394. Table 1 presents expected payments by state and month, as well as national totals.

Table 1. Expected Dairy Margin Coverage Payments for 2020 Based on Futures Prices on April 3, 2020

| State/Region | Jan-Mar | Apr-Jun | Jul-Sep | Oct-Dec | 2020 Total |
|---------------|-------------|---------------|---------------|--------------|---------------|
| Arizona | \$14,738 | \$883,375 | \$626,275 | \$318,111 | \$1,842,499 |
| California | \$329,844 | \$19,861,691 | \$14,074,331 | \$7,137,552 | \$41,403,418 |
| Colorado | \$43,292 | \$2,594,911 | \$1,839,681 | \$934,449 | \$5,412,333 |
| Florida | \$10,877 | \$667,775 | \$467,293 | \$234,771 | \$1,380,716 |
| Georgia | \$22,342 | \$1,366,091 | \$967,133 | \$488,935 | \$2,844,501 |
| Idaho | \$71,243 | \$4,270,761 | \$3,027,452 | \$1,537,766 | \$8,907,223 |
| Illinois | \$67,051 | \$4,131,334 | \$2,917,533 | \$1,471,460 | \$8,587,378 |
| Indiana | \$54,128 | \$3,690,683 | \$2,529,730 | \$1,196,644 | \$7,471,184 |
| Iowa | \$209,556 | \$12,628,793 | \$8,947,500 | \$4,537,432 | \$26,323,281 |
| Kansas | \$38,592 | \$2,321,807 | \$1,644,275 | \$834,444 | \$4,839,119 |
| Michigan | \$151,801 | \$9,173,229 | \$6,497,216 | \$3,290,294 | \$19,112,540 |
| Minnesota | \$529,617 | \$31,809,971 | \$22,544,238 | \$11,443,665 | \$66,327,491 |
| New Mexico | \$15,894 | \$952,663 | \$675,397 | \$343,062 | \$1,987,015 |
| New York | \$217,817 | \$13,146,322 | \$9,313,010 | \$4,721,138 | \$27,398,287 |
| Ohio | \$146,811 | \$8,866,142 | \$6,272,474 | \$3,173,266 | \$18,458,694 |
| Oregon | \$32,526 | \$1,949,577 | \$1,382,167 | \$702,059 | \$4,066,329 |
| Pennsylvania | \$221,506 | \$13,413,531 | \$9,485,376 | \$4,798,205 | \$27,918,618 |
| South Dakota | \$46,616 | \$2,807,222 | \$1,987,623 | \$1,007,771 | \$5,849,232 |
| Texas | \$112,014 | \$6,714,045 | \$4,759,971 | \$2,417,783 | \$14,003,814 |
| Utah | \$46,663 | \$2,796,945 | \$1,982,914 | \$1,007,203 | \$5,833,724 |
| Vermont | \$37,354 | \$2,238,967 | \$1,587,332 | \$806,270 | \$4,669,923 |
| Virginia | \$71,378 | \$4,295,716 | \$3,044,599 | \$1,544,987 | \$8,956,681 |
| Washington | \$76,925 | \$4,610,865 | \$3,268,907 | \$1,660,411 | \$9,617,108 |
| Wisconsin | \$960,501 | \$57,789,700 | \$40,946,434 | \$20,780,023 | \$120,476,658 |
| 24 States | \$3,529,087 | \$212,982,116 | \$150,788,861 | \$76,387,701 | \$443,687,765 |
| Other States | \$429,929 | \$26,053,619 | \$18,435,520 | \$9,327,561 | \$54,246,629 |
| United States | \$3,959,016 | \$239,035,735 | \$169,224,381 | \$85,715,262 | \$497,934,394 |

Dairy Revenue Protection

Dairy Revenue Protection (DRP) is a recently introduced insurance program administered by the USDA Risk Management Agency, and offered by private insurance agencies (Newton, 2018). DRP offers quarterly milk revenue protection for up to five calendar quarters. For example, on April 3, 2020 producers could protect milk revenue through Jul-Sep 2021. Unlike DMC, producers can customize their milk price under DRP to minimize basis risk relative to their own mailbox milk price. Though March 27, total declared milk production covered under DRP for calendar year 2020 is 42,317,553,125 pounds, and effective covered pounds (defined as declared pounds times protection factor) are 51,566,445,093 pounds, or 23% of expected U.S. milk production for 2020. Total premiums for calendar year 2020 are \$146,450,954, of which producers paid \$82,510,841. Total protected revenue is \$8,592,320,958. As of April 4, 2020, expected indemnities for calendar year 2020 are \$906,083,559.

Table 2. Expected Dairy Revenue Protection Indemnities for calendar year 2020 based on Futures Prices on April 3, 2020

| State/Region | Jan-Mar | Apr-Jun | Jul-Sep | Oct-Dec | 2020 Total |
|---------------|--------------|---------------|---------------|---------------|---------------|
| Arizona | \$349,558 | \$16,510,629 | \$9,977,894 | \$4,538,690 | \$31,376,771 |
| California | \$2,738,492 | \$88,775,196 | \$63,462,111 | \$43,340,242 | \$198,316,041 |
| Colorado | \$606,806 | \$16,027,716 | \$13,126,722 | \$9,746,217 | \$39,507,461 |
| Florida | \$0 | \$1,238,626 | \$1,694,516 | \$908,401 | \$3,841,543 |
| Georgia | \$127,539 | \$4,338,431 | \$5,258,100 | \$3,888,131 | \$13,612,201 |
| Idaho | \$1,300,207 | \$42,005,103 | \$26,266,253 | \$13,374,464 | \$82,946,027 |
| Illinois | \$56,297 | \$1,325,360 | \$769,170 | \$330,081 | \$2,480,908 |
| Indiana | \$981,812 | \$17,389,775 | \$11,694,050 | \$7,895,531 | \$37,961,168 |
| Iowa | \$323,249 | \$6,521,598 | \$3,487,983 | \$2,141,632 | \$12,474,462 |
| Kansas | \$576,764 | \$14,604,970 | \$12,165,208 | \$6,761,422 | \$34,108,364 |
| Michigan | \$443,889 | \$16,178,311 | \$10,018,062 | \$6,276,007 | \$32,916,269 |
| Minnesota | \$373,311 | \$15,754,532 | \$7,812,529 | \$4,489,224 | \$28,429,596 |
| New Mexico | \$916,640 | \$18,840,896 | \$14,376,849 | \$6,550,256 | \$40,684,641 |
| New York | \$365,791 | \$12,396,066 | \$11,048,381 | \$9,204,995 | \$33,015,233 |
| Ohio | \$166,962 | \$6,244,776 | \$3,763,600 | \$2,554,193 | \$12,729,531 |
| Oregon | \$142,584 | \$8,529,037 | \$5,989,938 | \$4,571,838 | \$19,233,397 |
| Pennsylvania | \$244,686 | \$4,860,486 | \$3,718,873 | \$2,323,667 | \$11,147,712 |
| South Dakota | \$253,791 | \$12,341,139 | \$8,540,297 | \$5,413,811 | \$26,549,038 |
| Texas | \$998,652 | \$34,310,062 | \$25,690,280 | \$18,998,573 | \$79,997,567 |
| Utah | \$89,575 | \$1,979,530 | \$897,039 | \$470,514 | \$3,436,658 |
| Vermont | \$92,664 | \$1,176,359 | \$1,199,026 | \$918,273 | \$3,386,322 |
| Virginia | \$7,940 | \$182,295 | \$98,842 | \$88,507 | \$377,584 |
| Washington | \$235,859 | \$9,991,166 | \$8,207,558 | \$6,453,256 | \$24,887,839 |
| Wisconsin | \$1,798,532 | \$59,176,794 | \$34,593,856 | \$19,822,632 | \$115,391,814 |
| 24 States | \$13,191,600 | \$410,698,853 | \$283,857,137 | \$181,060,557 | \$888,808,147 |
| Other States | \$210,740 | \$7,959,225 | \$5,984,102 | \$3,121,345 | \$17,275,412 |
| United States | \$13,402,340 | \$418,658,078 | \$289,841,239 | \$184,181,902 | \$906,083,559 |

Current Milk Marketing Challenges and Dairy Policy Options

In the early weeks of the COVID-19 outbreak in the United States, sales of dairy products to foodservice channels collapsed, but it was offset by very high retail demand for fluid milk, cheese, yogurt, ice cream and other dairy products as consumers stocked refrigerators. However, year-on-year growth rates in retail sales have moderated by the end of March and are no longer sufficient to outweigh the losses in restaurant demand. Before the COVID-19 outbreak, we estimate that U.S. cheese sales were distributed into the following segments: 46% retail, 16% pizza, and 38% to foodservice and other channels. In April 2020, we expect retail sales to grow 20% year-on-year and pizza sales to be 2.0% higher than in 2019. Other food service sales have been reduced by 80% vs. a year ago. As a consequence, domestic cheese consumption will shrink by an estimated total of 21% in April vs one year ago. As long as mandatory shelter-in-place orders are enforced, we estimate the U.S. will have approximately 1,100 tankers of milk per day more than will be needed to meet current demand. Ability to divert milk into dairy commodities that can be stored long-term is very limited as warehouse and cold storage capacity utilization is very high. Bottom line, we are likely to see unprecedented volumes of milk dumped on dairy farms. Even at current, depressed milk prices, total milk value lost to dumping in April could exceed \$250,000,000. Private dairy processors and cooperatives will need to pass the lost value from dumping milk to producers in the form of milk check deductions. These deductions are not covered by DRP nor DMC programs. Beyond the immediate misery such losses would bring to dairy producers battered by five years of negative net farm incomes, there is a danger that producers may conclude that no risk management programs are effective against black swan events, if demand shocks are addressed by forced reductions to milk production which widen basis relative to hedge prices.

For these reasons, policymakers should explore programs for compensating dairy producers for milk value lost due to dumping. In calendar years 2018 and 2019, the Wildfires and Hurricanes Indemnity and Milk Loss (WHIP-ML) Program provided indemnities to eligible dairy operations for milk that was dumped or removed without compensation from the commercial milk market due to hurricanes, floods, wildfires and other natural calamities. If WHIP-ML is chosen as one of the programs used to address COVID-19 impacts on dairy markets, it would need to be reauthorized, with two changes needed to make it useful for COVID-19 disaster event:

- 1) Expand eligible disaster causes to cover COVID-19 outbreak.
- 2) Remove payment limitation per farm.

Alternative programs should also be explored if they offer a faster disbursement of funds to dairy processors and producers. Finally, given the uncertainty regarding the duration of demand destruction, any dumping compensation program should be mindful of the incentives it provides regarding the potentially needed reduction in dairy herd size.

References

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