

A RISK MANAGEMENT

CASE STUDY

Dairy Margin Coverage

2020



CENTER FOR
Dairy EXCELLENCE

- During the 2020 enrollment period, DMC was not projected to trigger indemnities.
- However, John Dairy decided to sign up anyway. John's established production history was 3,425,600 pounds. He decided to enroll 95% of his production history at the maximum \$9.50/cwt margin coverage.
- DMC triggered indemnities at the \$9.50 margin coverage six months out of the year
- During 2021, USDA changed the alfalfa hay portion of the feed cost calculation from the average of mid-grade and high-quality alfalfa hay price to the high-quality hay price only. This change was retroactive to January 1, 2020 and resulted in further net benefit that John received in a lump sum payment in 2021.



John Dairy Farm				
Administration fee			\$100	
Production history (pounds)			3,425,600	
Margin covered (\$ per cwt)			\$9.50	
Percentage covered (%)			95%	
Total volume covered (pounds)			3,254,320	
Premium (\$ per cwt)			0.150	
Total premium (\$)			\$4,981.48	
Total premium with 25% discount (\$)			\$3,761.11	
	Actual DMC Mmargin, \$/cwt	Indemnity Rate, \$/cwt	Expected monthly payment	Expected Payment after Sequestration
January	\$10.72			
February	\$10.06			
March	\$9.15	\$0.35	\$949.18	\$893.18
April	\$6.03	\$3.47	\$9,410.41	\$8,855.19
May	\$5.37	\$4.13	\$11,200.28	\$10,539.47
June	\$9.99			
July	\$12.41			
August	\$10.83			
September	\$9.40	\$0.10	\$271.19	\$255.19
October	\$11.13			
November	\$11.87			
December	\$8.78	\$0.72	\$1,952.59	\$1,837.39
2020 Total payment			\$23,783.66	\$22,380.42

2020 Net Benefit Before Alfalfa Adjustment	
Total Benefit for the year	\$0.73
Benefit after sequestration	\$0.69
Net Benefit after Premium	\$0.54
Total Net Benefit	\$17,398.94

John Dairy Farm				
Administration fee			\$100	
Production history (pounds)			3,425,600	
Margin covered (\$ per cwt)			\$9.50	
Percentage covered (%)			95%	
Total volume covered (pounds)			3,254,320	
Premium (\$ per cwt)			0.150	
Total premium (\$)			\$4,981.48	
Total premium with 25% discount (\$)			\$3,761.11	
	Actual DMC Mmargin, \$/cwt	Indemnity Rate, \$/cwt	Expected monthly payment	Expected Payment after Sequestration
January	\$10.45			
February	\$9.80			
March	\$8.95	\$0.55	\$1,491.56	\$1,403.56
April	\$5.84	\$3.66	\$9,925.68	\$9,340.06
May	\$5.16	\$4.34	\$11,769.79	\$11,075.37
June	\$9.83			
July	\$12.29			
August	\$10.69			
September	\$9.26	\$0.24	\$650.86	\$612.46
October	\$10.97			
November	\$11.64			
December	\$8.54	\$0.96	\$2,603.46	\$2,449.85
2020 Total payment			\$26,441.35	\$24,881.31

2020 DMC Net Benefit After Alfalfa Hay Change	
Total Benefit for the year	\$0.81
Benefit after sequestration	\$0.76
Net Benefit after Premium	\$0.61
Total Net Benefit	\$19,899.83

Lump Sum Retroactive Alfalfa Payment	
	\$2,500.89



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2021



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- During the enrollment period for 2021 DMC, the COVID-19 pandemic was still causing market disruptions that were negatively impacting dairy markets.
- Early DMC projections were showing indemnity payments each month of 2021
- With projections like these, along with a near 100% probability net benefit predicted, Grady Silo decided to enroll her dairy in DMC.
- The USDA added Supplemental Dairy Margin Coverage that allowed dairy farms that have expanded since original production history (PH) was established to update production history based on actual 2019 production history
- Supplemental PH was defined as the difference between 2019 actual production and established PH
- Tier 1 cap remained at 5 million pounds combined
- Indemnities on Supplemental DMC were paid on 75% of established supplemental PH
- Supplemental DMC was retroactive to January 1, 2021



- Grady's Silo Dairy had an established production history of 3,500,00 pounds
- Grady had expanded her heard since original production history was established.
- 2019 actual production was 4,750,000
- Grady enrolled at the 95% volume, \$9.50/cwt coverage
- Total production enrolled = $(3,500,000 * 95\%) + ((4,750,000 - 3,500,000) * 75\%)$. Or, 4,262,500 pounds.
- DMC ended up triggering indemnities each month of 2021 except December.



Grady's Silo Dairy	
Administration fee	\$100
Production history+ supplemental (pounds)	4,750,000
Margin covered (\$ per cwt)	\$9.50
Percentage covered (%)	95%
Total volume covered (pounds)	4,262,500
Premium (\$ per cwt)	0.150
Total premium (\$)	\$6,493.75

	Actual DMC Mmargin, \$/cwt	Indemnity Rate, \$/cwt	Expected monthly payment	Expected Payment after Sequestration
January	\$6.90	\$2.60	\$9,235.42	\$8,709.00
February	\$5.97	\$3.53	\$12,538.85	\$11,824.14
March	\$6.26	\$3.24	\$11,508.75	\$10,852.75
April	\$6.77	\$2.73	\$9,697.19	\$9,144.45
May	\$6.67	\$2.83	\$10,052.40	\$9,479.41
June	\$6.03	\$3.47	\$12,325.73	\$11,623.16
July	\$5.47	\$4.03	\$14,314.90	\$13,498.95
August	\$5.03	\$4.47	\$15,877.81	\$14,972.78
September	\$6.69	\$2.81	\$9,981.35	\$9,412.42
October	\$8.54	\$0.96	\$3,410.00	\$3,215.63
November	\$9.14	\$0.36	\$1,278.75	\$1,205.86
December	\$9.53	\$0.00	\$0.00	\$0.00
2021 Total payment			\$110,221.15	\$103,938.54

2021 DMC Net Benefit	
Total Benefit for the year	\$2.59
Benefit after sequestration	\$2.44
Net Benefit after Premium	\$2.29
Net Benefit	\$97,444.79



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Dairy Margin Coverage

2022



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- During the enrollment period for 2022 DMC, milk price projections were showing significant improvement over 2021.
- Feed costs, although historically high, were expected to be offset by better milk prices through 2022.
- Early 2022 DMC projections showed no indemnities expected during 2022 with a near 0% probability of providing a net benefit to those enrolled in DMC.
- Sunny Day decided not to enroll in DMC for 2022 based on projections during the enrollment period.



- Unfortunately, markets through September 2022 did not behave as expected.
- Drought conditions in the U.S. and international factors such as the conflict between Russia and Ukraine caused feed and fertilizer prices to skyrocket.
- Softer than expected demand and logistic issues caused milk prices to be suppressed relative to early projections.
- These factors were a large part of the reason that caused the DMC margins to be lower than expected, triggering indemnities in August and September that more than covered DMC premiums.
- As of November 18, 2022, additional indemnities are projected for October, November, and December 2022.
- The net benefit from DMC during 2022 is not as great as in previous years. However, as a result of not being enrolled in DMC during 2022, Sunny lost some monetary opportunity by not enrolling in DMC.
- Sunny Day has an established production history of 4,675,000



Sunny Day Dairy				
Administration fee			\$100	
Production history (pounds)			4,675,000	
Margin covered (\$ per cwt)			\$9.50	
Percentage covered (%)			95%	
Total volume covered (pounds)			4,441,250	
Premium (\$ per cwt)			0.150	
Total premium (\$)			\$6,761.88	
	Actual DMC Mmargin, \$/cwt	Indemnity Rate, \$/cwt	Expected monthly payment	Expected Payment after Sequestration
January	\$11.54			
February	\$10.98			
March	\$11.55			
April	\$12.29			
May	\$12.51			
June	\$11.92			
July	\$9.92			
August	\$8.08	\$1.42	\$5,255.48	\$4,955.92
September	\$8.62	\$0.88	\$3,256.92	\$3,071.27
October				
November				
December				
2022 Total payment			\$8,512.40	\$8,027.19

Actual DMC Margins/Indemnities as of November 18, 2022

Guaranteed 2022 DMC Net Benefit	
Total Benefit for the year	\$0.19
Benefit after sequestration	\$0.18
Net Benefit after Premium	\$0.03
Net Benefit	\$1,265.31

Sunny Day Dairy				
Administration fee			\$100	
Production history (pounds)			4,675,000	
Margin covered (\$ per cwt)			\$9.50	
Percentage covered (%)			95%	
Total volume covered (pounds)			4,441,250	
Premium (\$ per cwt)			0.150	
Total premium (\$)			\$6,761.88	
	Actual DMC Mmargin, \$/cwt	Indemnity Rate, \$/cwt	Expected monthly payment	Expected Payment after Sequestration
January	\$11.54			
February	\$10.98			
March	\$11.55			
April	\$12.29			
May	\$12.51			
June	\$11.92			
July	\$9.92			
August	\$8.08	\$1.42	\$5,255.48	\$4,955.92
September	\$8.62	\$0.88	\$3,256.92	\$3,071.27
October	\$9.02	\$0.48	\$1,776.50	\$1,675.24
November	\$8.94	\$0.56	\$2,072.58	\$1,954.45
December	\$9.11	\$0.39	\$1,443.41	\$1,361.13
2022 Total payment			\$13,804.89	\$13,018.01

Projected DMC Margins/Indemnities as of November 18, 2022

Theoretical 2022 DMC Net Benefit	
Total Benefit for the year	\$0.31
Benefit after sequestration	\$0.29
Net Benefit after Premium	\$0.14
Net Benefit	\$6,256.13

