

Vermont Dairy Data 2024

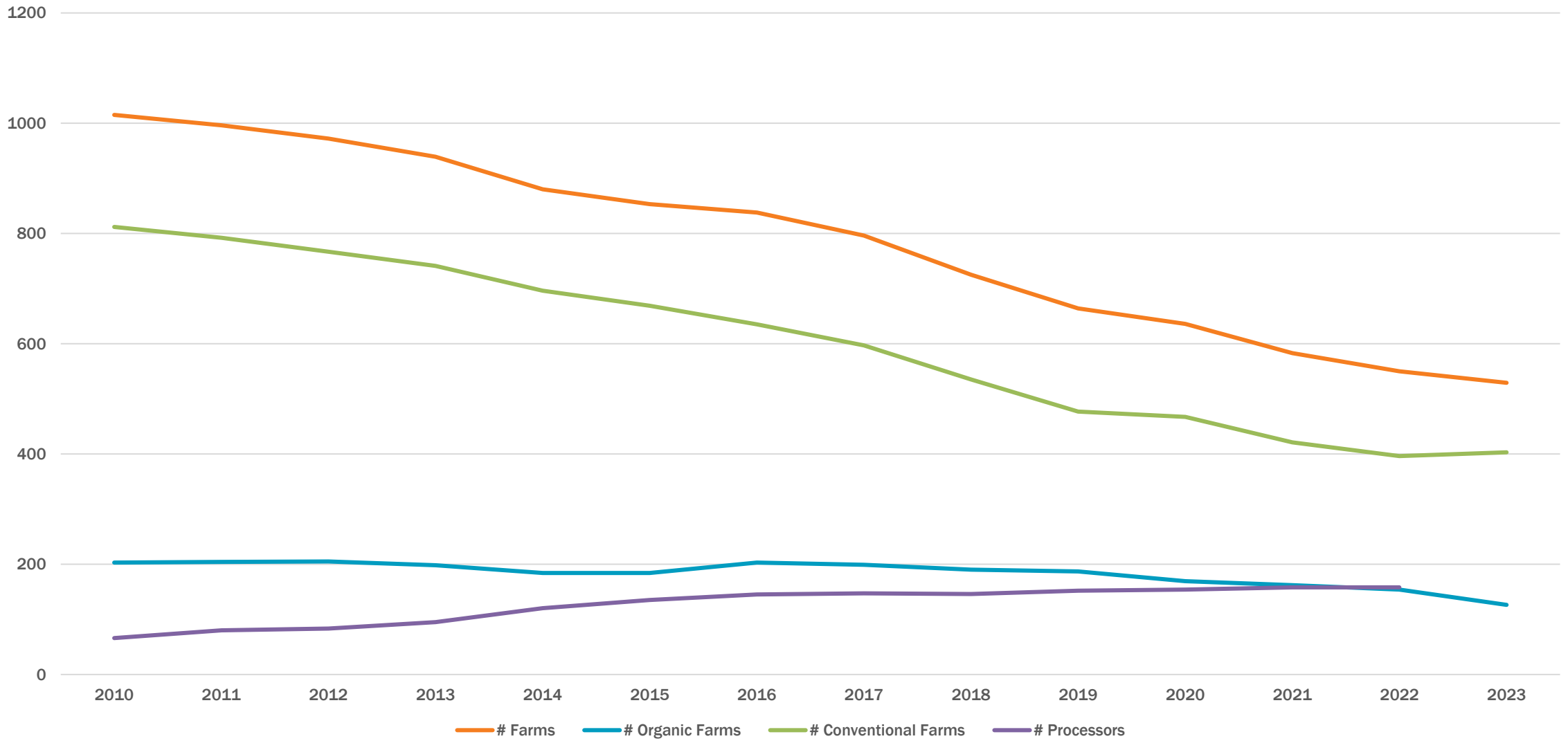
Production, Impacts, and
Trends



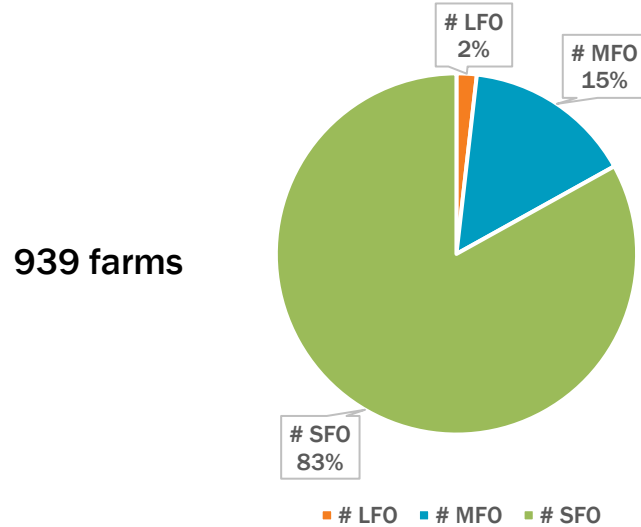
Vermont Data



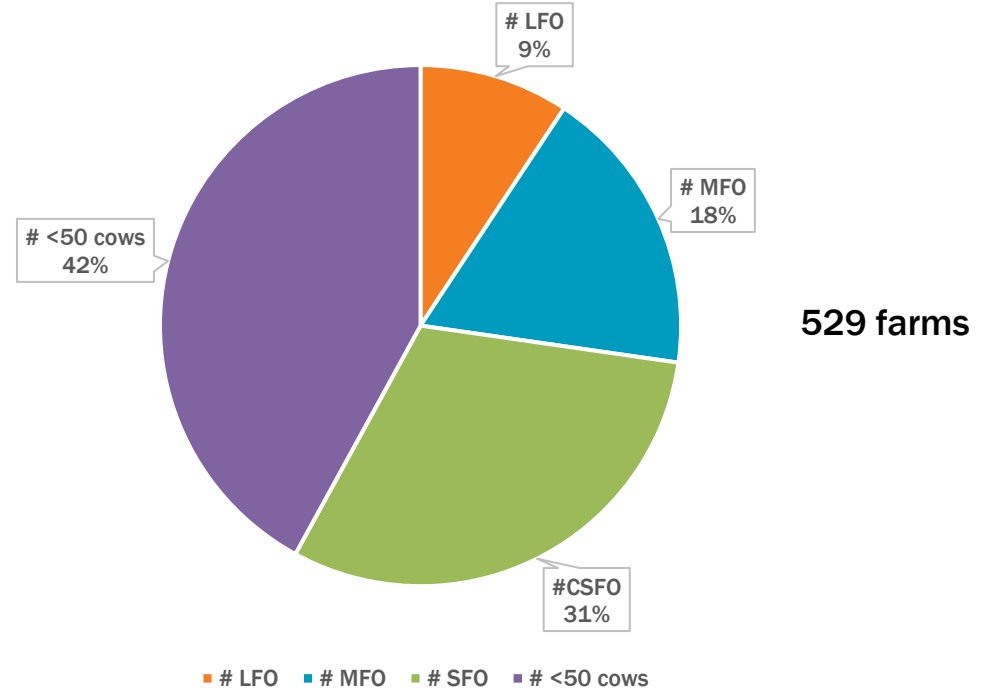
Change in Vermont Dairy Farms & Processors: 2010 - 2023



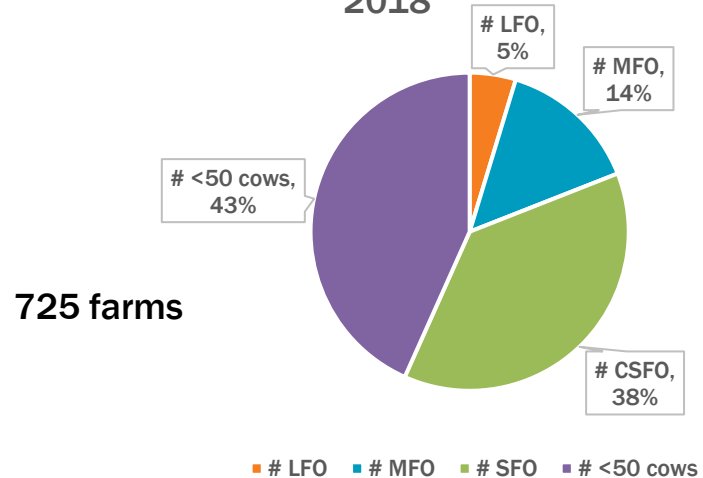
Distribution of Vermont Dairy Farm Sizes: 2013



Distribution of Vermont Dairy Farm Sizes: 2023



Distribution of Vermont Dairy Farm Sizes: 2018

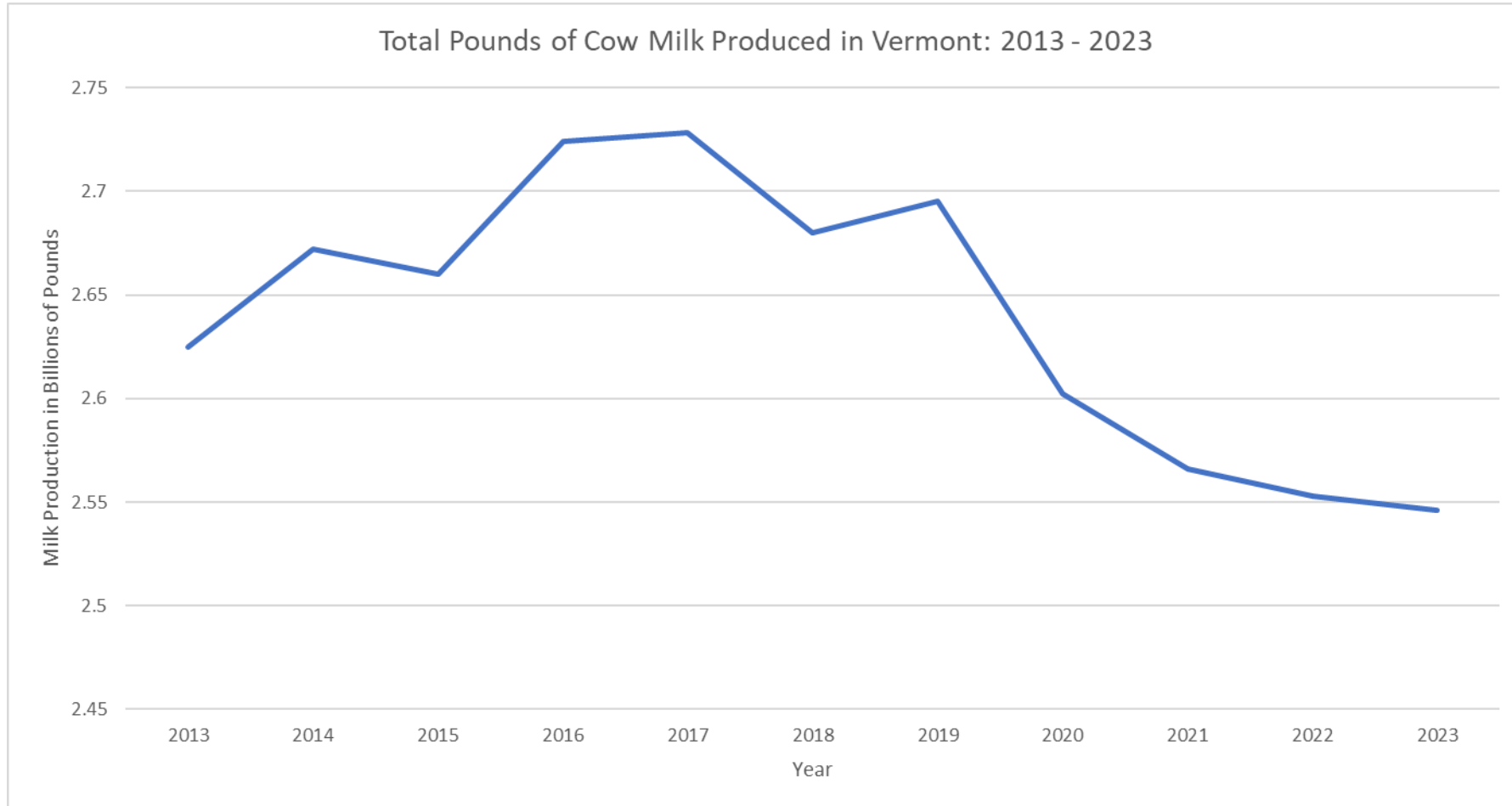


Farm size designations:

- SFO: less than 50 dairy cows
- CSFO: 50 – 199 dairy cows
- MFO: 200 – 699 dairy cows
- LFO: 700+ dairy cows
- Note: the CSFO designation was added in 2017

Organic farm information (126 total farms in 2023):

- Most are milking less than 200 cows, approximately 10 are MFOs
- Less than 20 are 100% grass-fed



In 2022, organic milk production was approximately 140.4 million pounds, or 5.5% of total Vermont cow dairy milk volume

February 2024 Dairy Farm Numbers by County and Animal Species

County	Cattle Farms
Addison	76
Bennington	8
Caledonia	40
Chittenden	24
Essex	9
Franklin	93
Grand Isle	8
Lamoille	20
Orange	44
Orleans	78
Rutland	32
Washington	17
Windham	18
Windsor	19
Total	486

County	Goat Farms
	4
Addison	3
Bennington	2
Caledonia	2
Chittenden	1
Franklin	3
Grand Isle	2
Lamoille	2
Orange	2
Orleans	3
Rutland	3
Windham	3
Windsor	7
Total	37

County	Sheep Farms
Addison	1
Franklin	1
Orleans	1
Windham	1
Windsor	2
Total	6

*The top row of goat dairy farms are located in Canada, inspected by VAAFM staff, and supply milk to a Vermont processor

Dairy farmers have numerous choices



Commodity
Compete on cost of production

Value-Added
Compete on specialization



Expansion

r-BST free

Efficiency

Innovation and technology

VT Brand

Environmental standards

Non-GMO

Animal Welfare certified

A2A2

Organic

Sell to farmstead cheesemaker

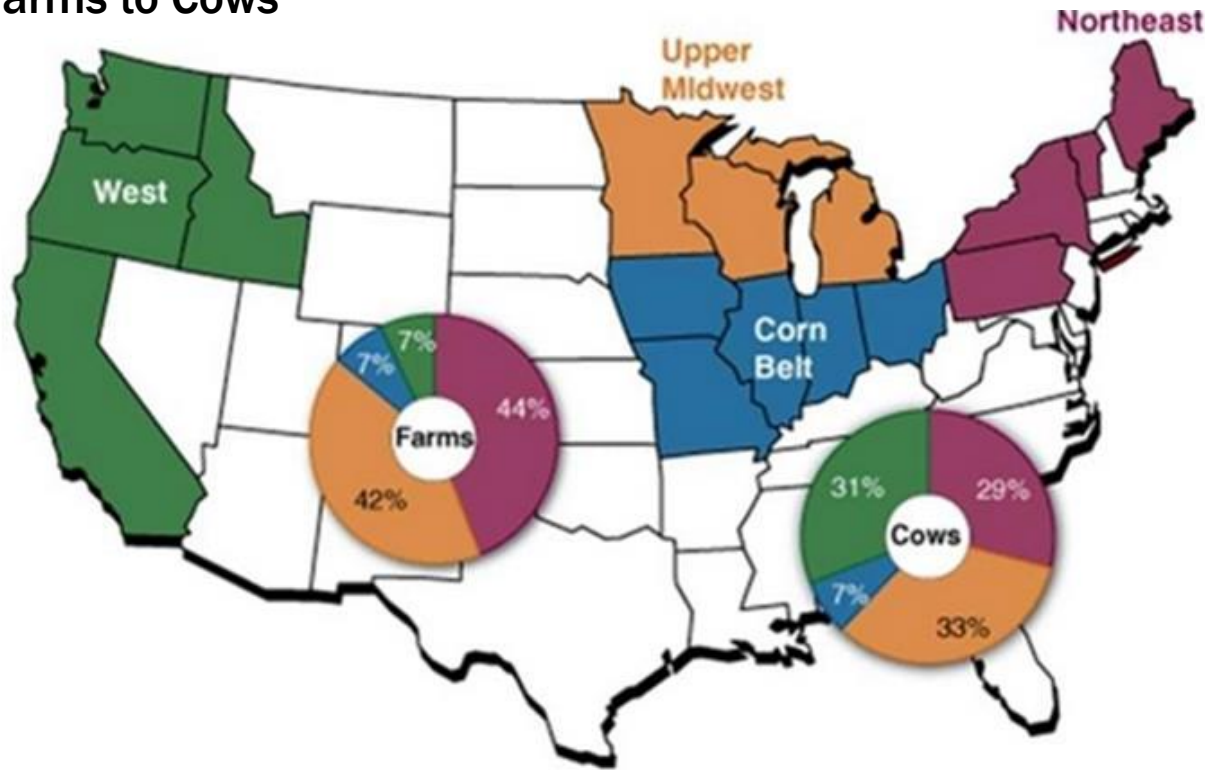
On farm processing

100% Grassfed

Raw Milk

Organic Specific Production Data

2005 Production: Farms to Cows

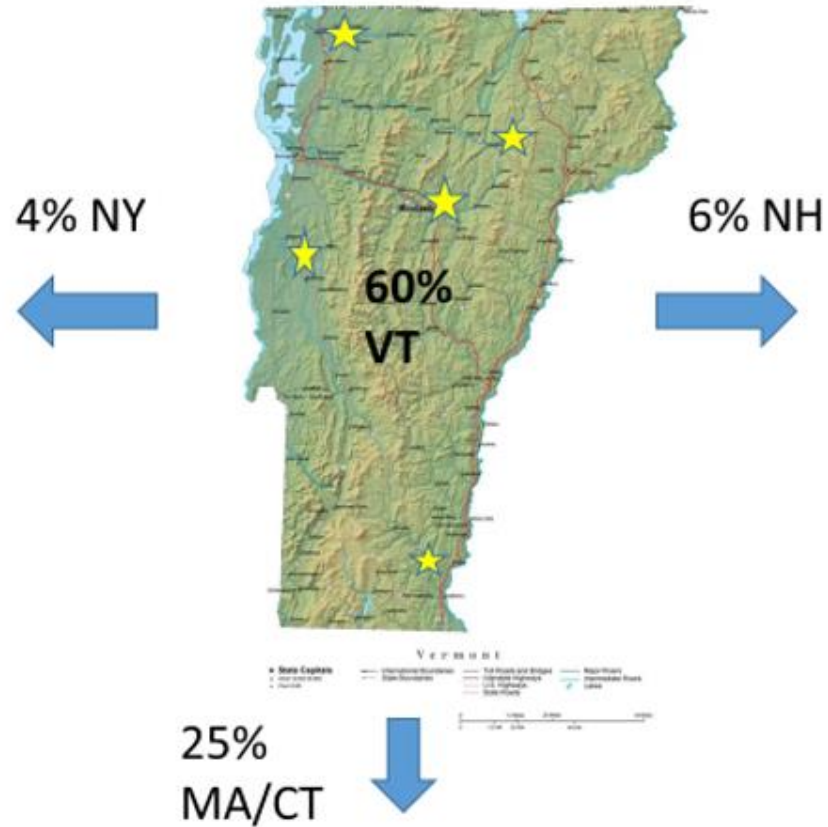


Source: USDA, Economic Research Service calculations based on data from USDA's 2005 Agricultural Resource Management Survey.

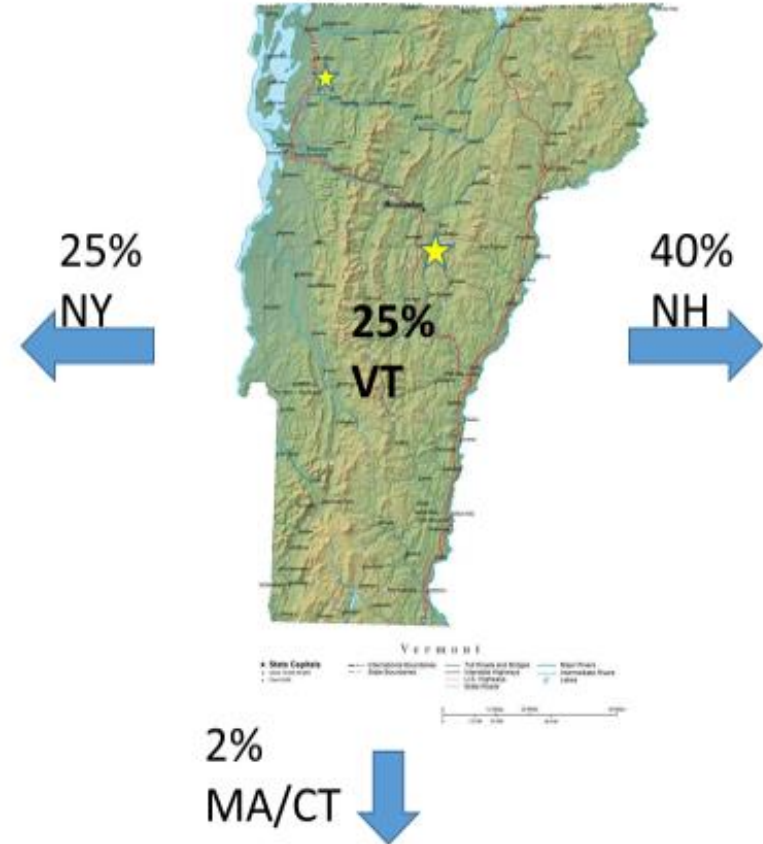
- In 2020, 9.1% of farms were organic (representing just 3.6% of cow numbers) and produced 2.3% of total milk
 - The top five organic milk producing states (same as top 5 for conventional)
 - California – 150 farms produced 889 million pounds
 - Texas – 9 farms produced 821 million pounds
 - Wisconsin – 525 farms produced 440 million pounds
 - New York – 607 farms produced 386 million pounds
 - Idaho – 29 farms producing 364 million pounds
-
- Vermont – 187 farms producing 222 million pounds

Vermont Dairy: Where the Milk Goes for Processing

VT Conventional Milk Movement



VT Organic Milk Movement

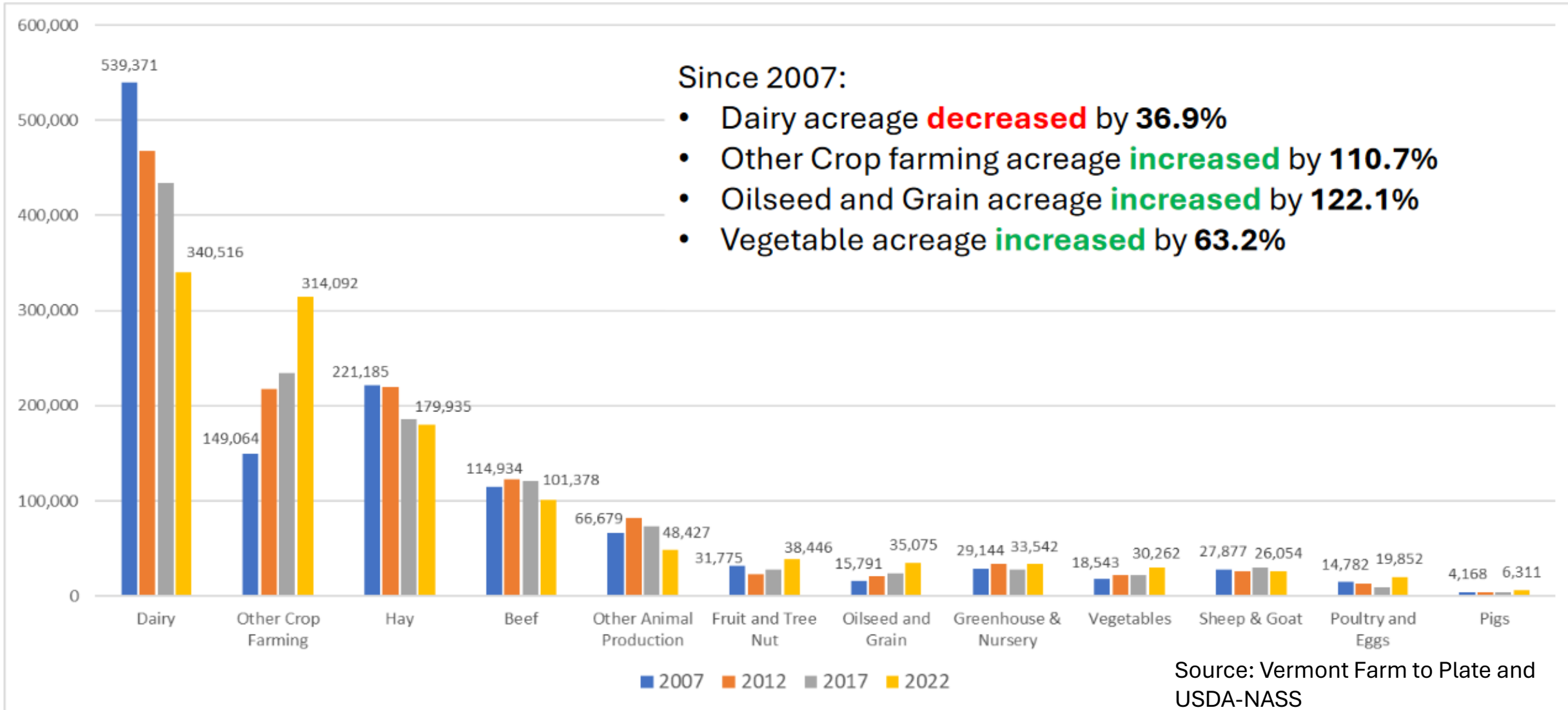


On-farm Processors: 70
Off-farm Processors: 88

Production and Consumption Trends

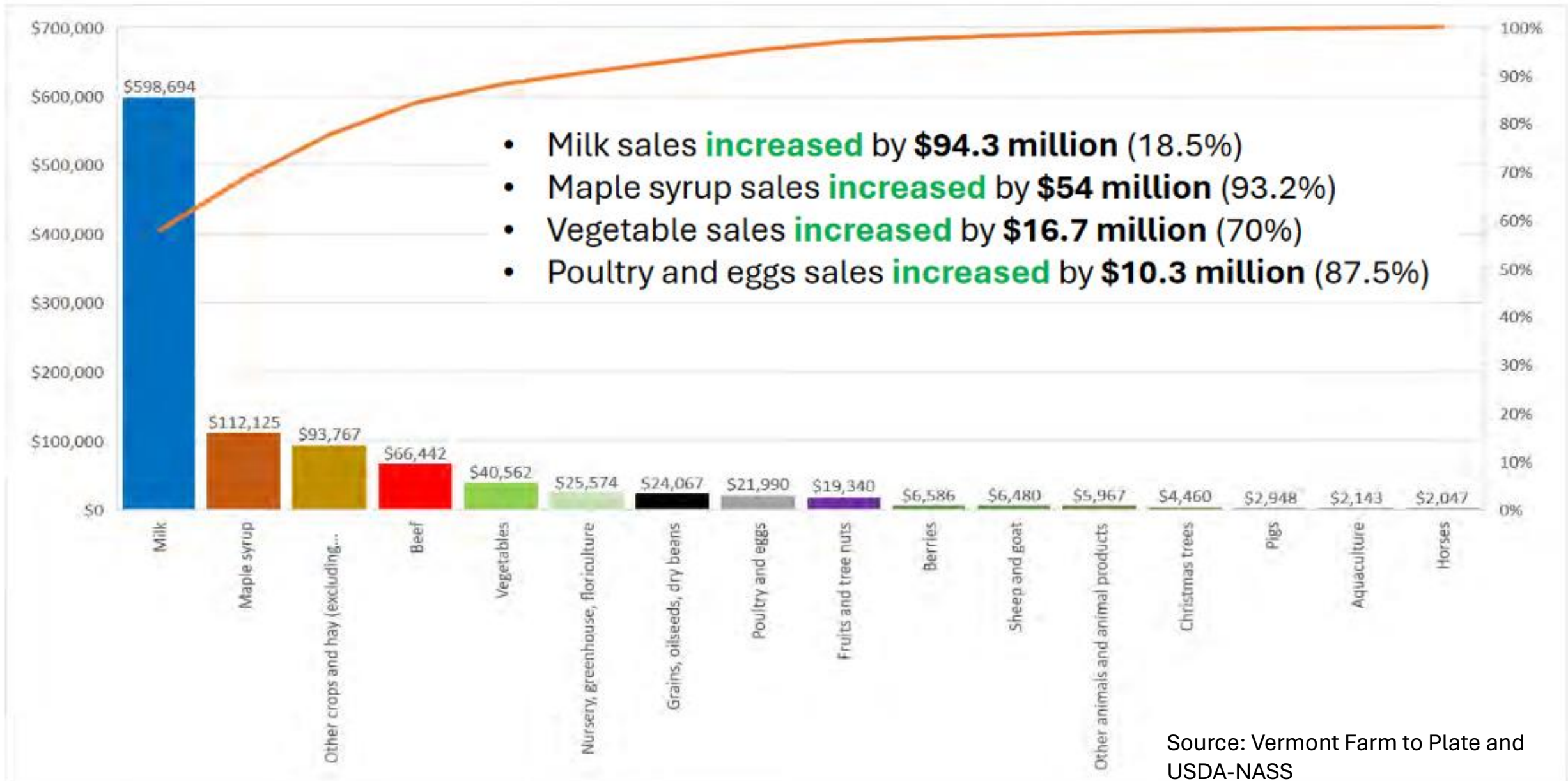
FARMLAND:

TOTAL ACRES OF FARMLAND, BY COMMODITY OR COMMODITY GROUP 2007-2022



ECONOMICS:

VALUE OF SALES BY COMMODITY/COMMODITY GROUP, 2022 (IN \$1,000)



Ranking of Market Value of Ag Products Sold, 2022 (Preliminary)

Item	Farms	Sales (\$1,000)	Rank by Sales	Percent of Total Sales *	Top County
Total sales	6,537	1,033,194	(X)	100	Addison
Milk from cows	449	598,694	1	57.9	Addison
Other crops and hay	3,141	205,892	2	19.9	Franklin
Cattle and calves	1,288	66,442	3	6.4	Franklin
Vegetables, melons, potatoes, and sweet potatoes	752	40,562	4	3.9	Windsor
Fruits, tree nuts, and berries	649	25,927	5	2.5	Windham
Nursery, greenhouse, floriculture, and sod	507	25,574	6	2.5	Chittenden
Grains, oilseeds, dry beans, and dry peas	262	24,067	7	2.3	Franklin
Poultry and eggs	1,032	21,990	8	2.1	Addison
Sheep, goats, wool, mohair, and milk	565	6,480	9	0.6	Addison
Other animals and other animal products	404	5,967	10	0.6	Addison
Cultivated Christmas trees and short rotation woody crops	181	4,460	11	0.4	Essex
Hogs and pigs	303	2,948	12	0.3	Franklin
Aquaculture	14	2,143	13	0.2	Rutland
Horses, ponies, mules, burros, and donkeys	119	2,047	14	0.2	Addison
Cotton and cottonseed	-	-	-	-	
Tobacco	-	-	-	-	



State Snapshot

» Top Agricultural Products by Sales, 2017

Milk from cows and cattle/calf sales made up the majority (\$405 million out of \$684 million) of agricultural sales in Vermont.



MILK FROM COWS
59.2%



MAPLE SYRUP
8.5%



CATTLE
8.4%

» Top Retail Food Sales by Market Channel, 2017

Grocery stores and restaurants accounted for 86.8% of total retail food sales (\$3.3 billion).



GROCERY STORES
56.2%



RESTAURANTS/
FAST FOOD
30.6%



LIQUOR STORES
4.0%



DIRECT SALES
1.6%

» Top Manufactured Products by Sales, 2017



OTHER DAIRY PRODUCTS
25.3%



CHEESE
18.5%



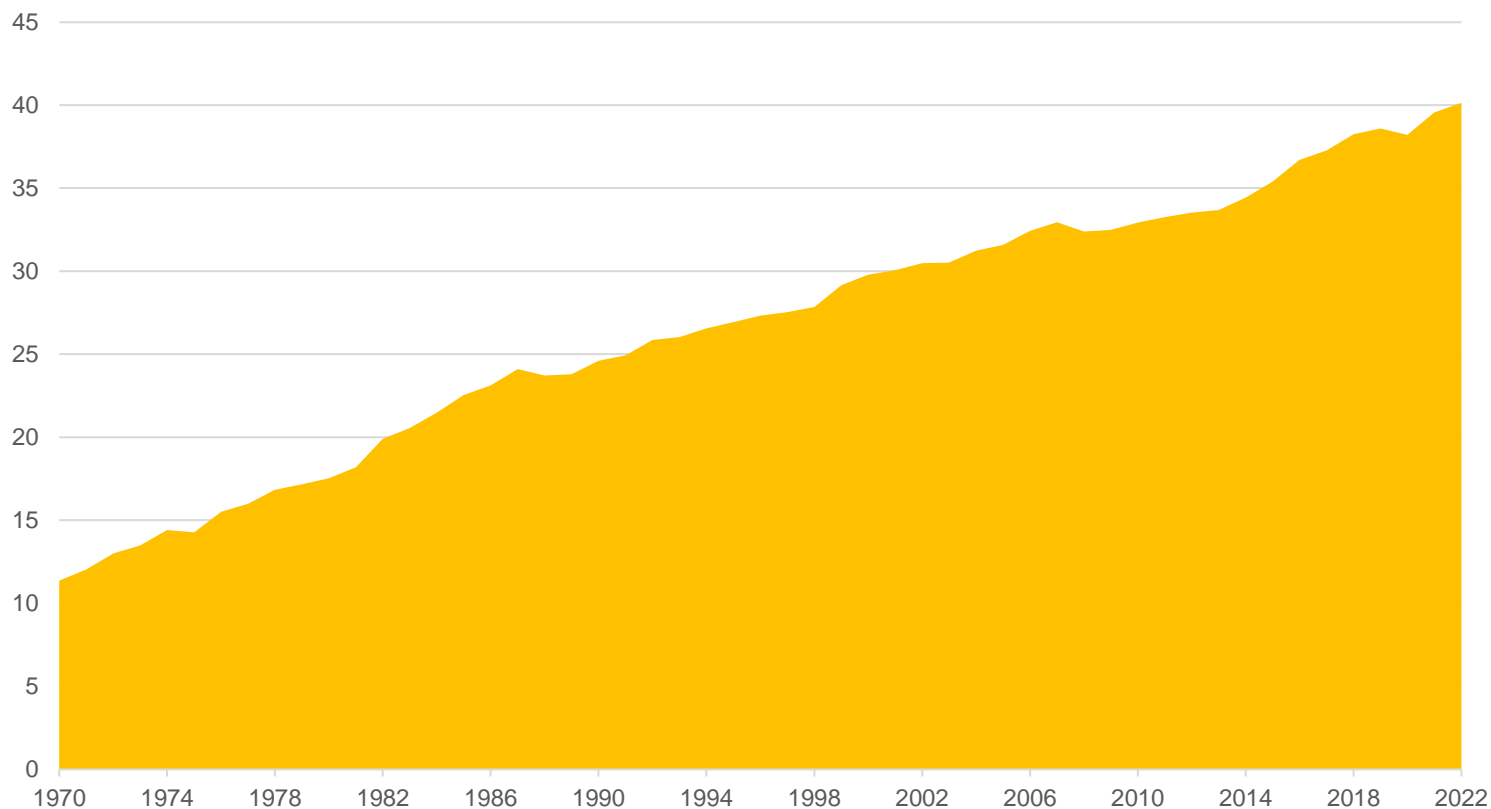
OTHER PRODUCTS
16.3%



U.S. per capita cheese consumption pushes past 40 pounds

- 2022 — 40 pounds
- 2001 — 30 pounds
- 1983 — 20 pounds
- 1967 — 10 pounds
- **Mozzarella – pizza cheese**
 - 16 pounds in 2022
 - 10 pounds in 1995
- **Cheddar**
 - 11.4 pounds in 2022
 - 9 pounds in 1995
- **Hispanic Cheese**
 - 1.05 pounds in 2022
 - 0.33 pound in 1996

Cheese consumption now double 1982's 20 pounds



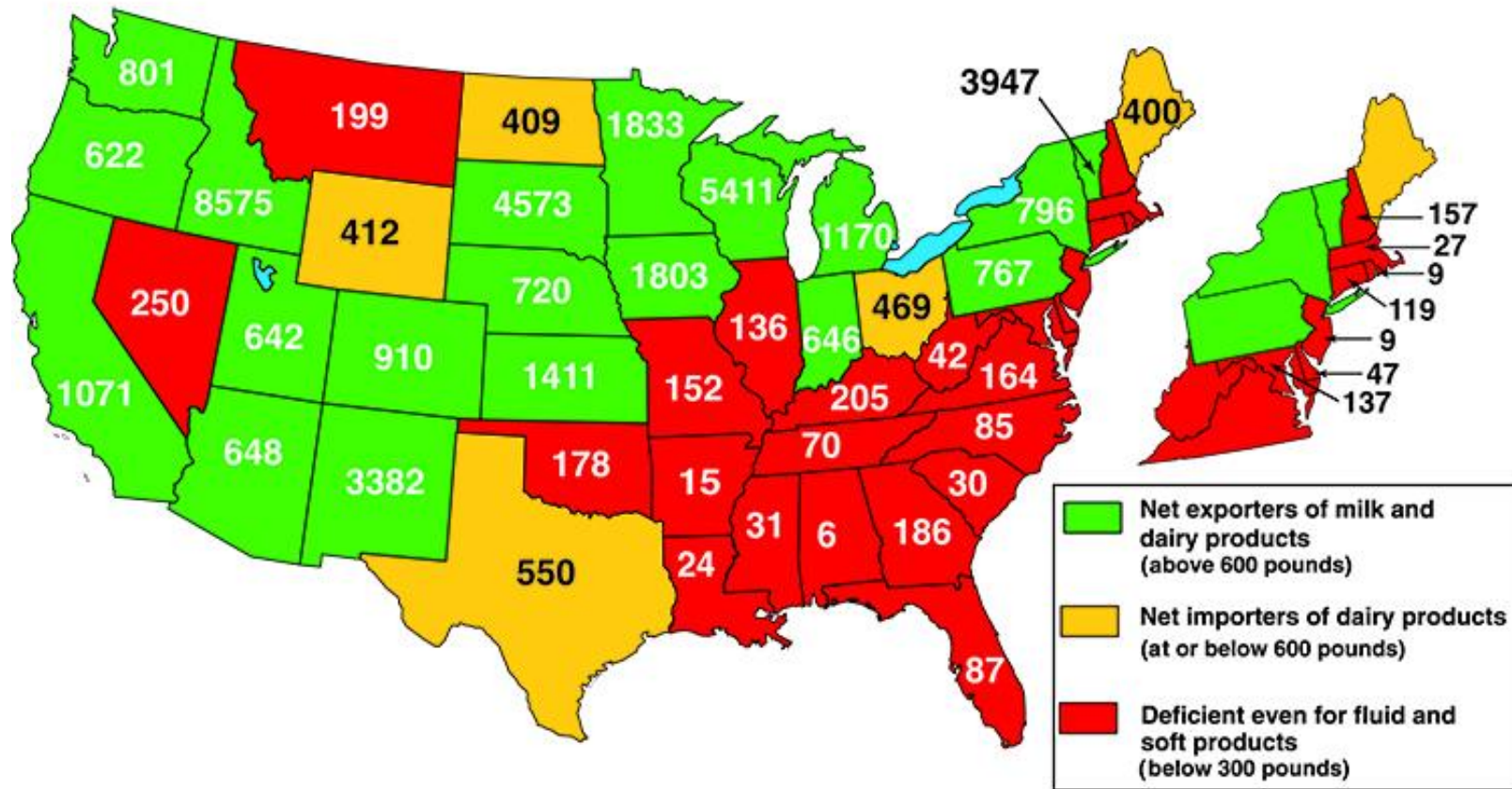
What's the future for U.S. cheese consumption?

- Countries above 60 pounds
 - Denmark – 62 pounds
 - France — 60 pounds
- Countries above 50 pounds
 - Austria
 - Finland
 - Germany
 - Greece
 - Netherlands
 - Switzerland
- U.S. consumption will evolve differently

Every other decade a new 10 pounds – 50 pounds 2040?

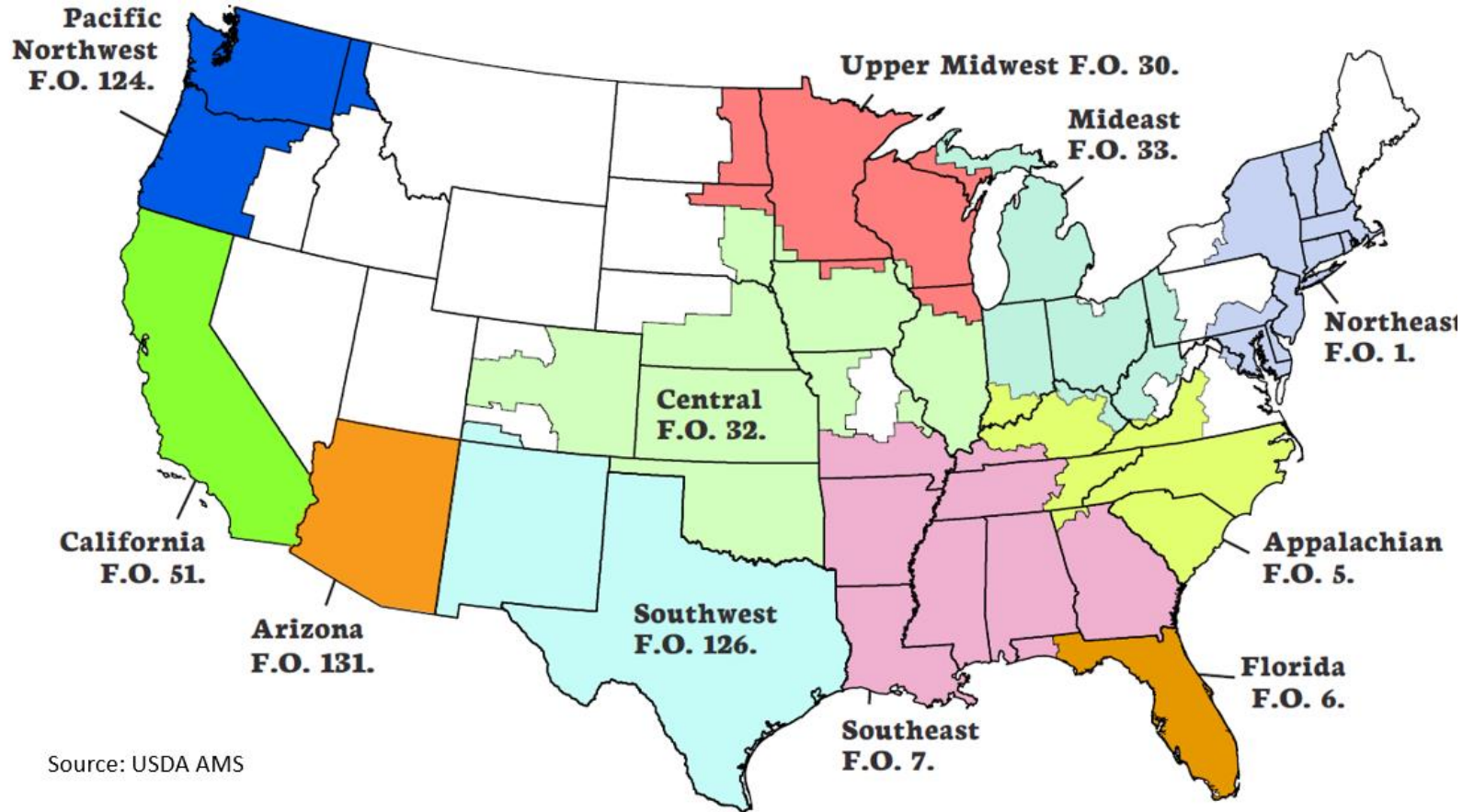


State-by-State Dairy Production: Net Exporters vs. Net Importers



Milk Pricing Overview

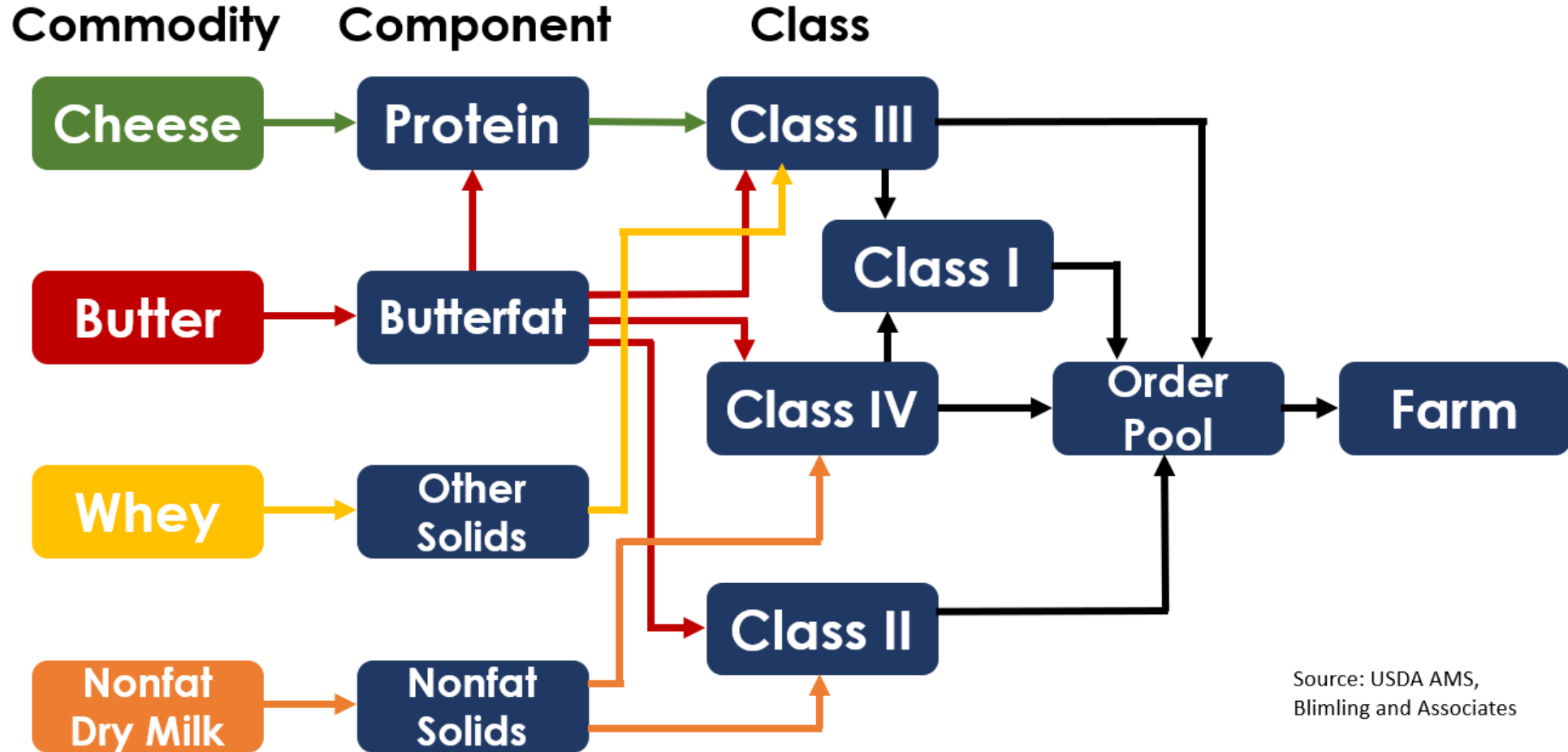
Figure 1. Federal Milk Marketing Orders



Source: USDA AMS

Orders do two main things: pool and classify milk

Figure 2. Commodity Value Flows in Pricing



Source: USDA AMS, Blimling and Associates

Milk pricing in action

NORTHEAST MILK PRICE FORECASTS, 2019 - 2020

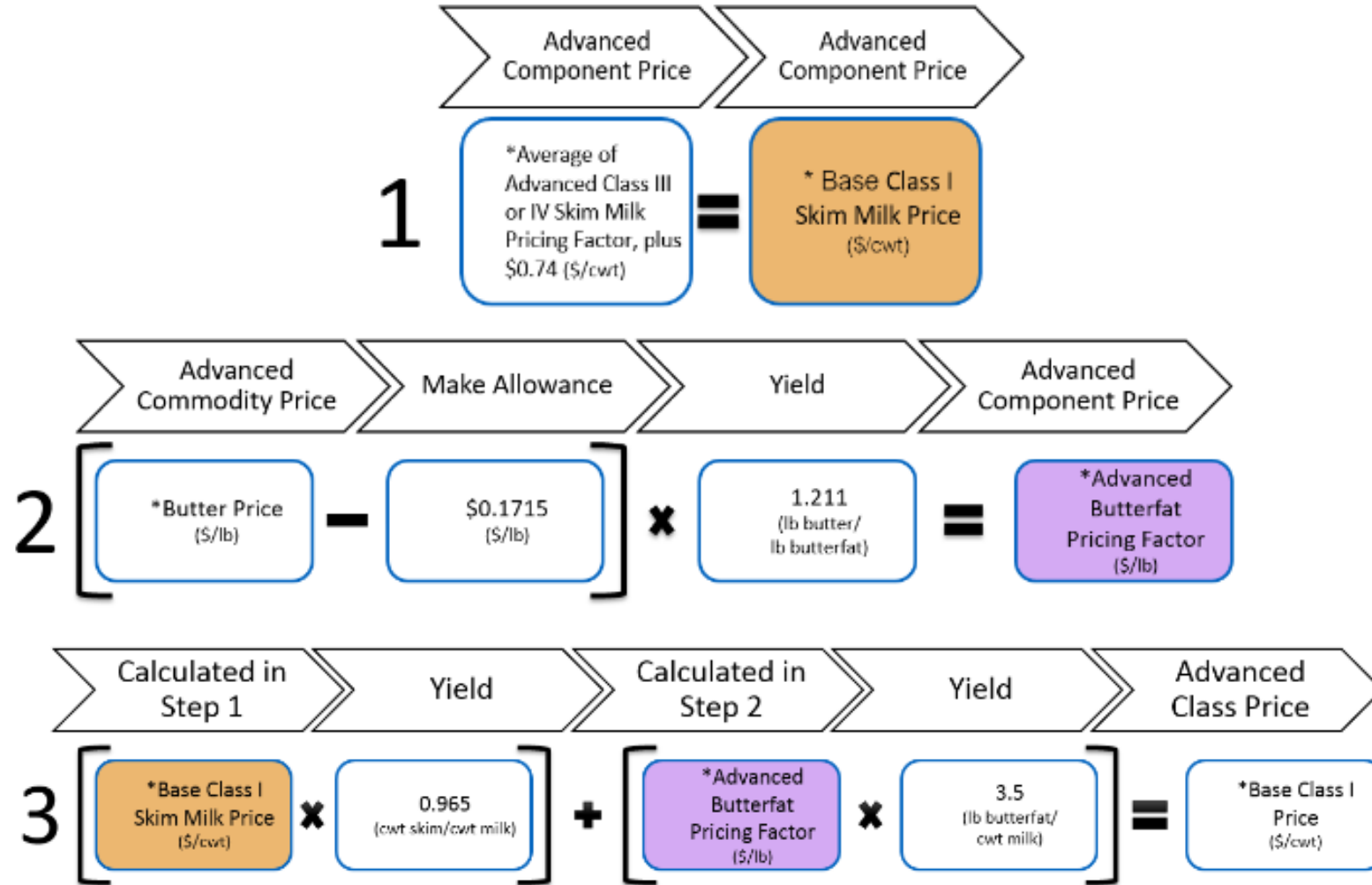
October 27, 2019



2019	COMPONENT PRICES PER POUND			BOSTON BLEND PRICE @3.5 bf	CLASS PRICES				Class III Futures	DMC Margin*	
	BUTTER	OTHER			I	II	III	IV			
	FAT	PROTEIN	SOLIDS								BOSTON PPD/cwt.
JAN	\$2.498	\$1.193	\$0.290	\$2.46	\$16.42	\$18.37	\$15.74	\$13.96	\$15.48	\$13.96	\$7.71
FEB	\$2.535	\$1.178	\$0.263	\$2.76	\$16.65	\$18.55	\$16.14	\$13.89	\$15.85	\$13.89	\$7.91
MAR	\$2.546	\$1.630	\$0.220	\$2.13	\$17.17	\$19.23	\$16.60	\$15.04	\$15.71	\$15.04	\$8.66
APR	\$2.538	\$1.989	\$0.199	\$1.36	\$17.34	\$19.01	\$16.38	\$15.96	\$15.73	\$15.96	\$8.82
MAY	\$2.572	\$2.116	\$0.185	\$1.42	\$17.80	\$19.67	\$16.47	\$16.38	\$16.28	\$16.38	\$9.00
JUN	\$2.658	\$2.005	\$0.170	\$2.01	\$18.28	\$20.32	\$17.30	\$16.27	\$16.83	\$16.27	\$8.63
JUL	\$2.686	\$2.403	\$0.169	\$1.28	\$18.83	\$20.42	\$17.61	\$17.55	\$16.89	\$17.55	\$9.27
AUG	\$2.657	\$2.445	\$0.173	\$1.37	\$18.97	\$21.14	\$17.59	\$17.60	\$16.74	\$17.60	\$9.05
SEP	\$2.488	\$2.863	\$0.176	\$0.47	\$18.78	\$21.10	\$16.94	\$18.31	\$16.35	\$18.31	\$10.15
OCT	\$2.396	\$3.118	\$0.148	\$0.50	\$19.09	\$21.09	\$16.65	\$18.56	\$16.34	\$18.67	\$10.58
NOV	\$2.324	\$3.474	\$0.130	\$0.16	\$19.45	\$21.39	\$16.86	\$19.26	\$16.47	\$19.55	\$10.90
DEC	\$2.290	\$3.306	\$0.133	\$0.70	\$19.39	\$21.65	\$17.22	\$18.66	\$16.55	\$18.57	\$10.79
AVG	\$2.516	\$2.310	\$0.188	\$1.39	\$18.18	\$20.16	\$16.79	\$16.79	\$16.27	\$16.81	\$9.34

The Boston Producer Price Differential + Class III price = Boston Blend Price

Class I Calculations



Dairy Margin Coverage

PROGRAM OVERVIEWS AND IMPACTS TO VERMONT DAIRY FARMERS



What is Dairy Margin Coverage?

Authorized in the 2018 Farm Bill, replacing the Margin Protection Program

Voluntary program operated through the Farm Service Agency

Program Specifics:

- Insurance program that provides payment when the difference between the all-milk price and average feed price falls below a certain dollar amount. The difference between the two prices is the *margin*
- The all-milk price is the “average price received, per hundredweight of milk, by dairy operations for all milk sold to plants and dealers in the United States”
- The average feed price is the price of a prepared complete dairy feed based on current US prices for corn, soybeans, and alfalfa

How does DMC enrollment work?



- Farmer signs up via Farm Service Agency and decides how to pay for premium – in full or via milk check deduction. Sign up process includes:
 - Selecting coverage level - \$9.50 rate is highest coverage level and what is recommended
 - Premium calculated by coverage level – at \$9.50 it is \$0.15 per hundredweight
 - Identifying covered milk volume
 - Average of production in years 2011-2013
 - Addition of supplemental coverage if production has increased
 - Newer operations have options to determine production history
 - Select coverage percentage (how much of production volume do they want enrolled) – from 5% - 95%
- There is no organic version of DMC, all prices are determined using conventional feed and milk

DMC Outlook for 2024

- Based on projections, only the first two months will likely have DMC payments triggered
 - Why is this happening when in 2023 there were eleven months with payments?
 - Feed prices have declined
 - Milk prices are improving
 - Payments are triggered when the margin falls below the coverage level

How are DMC payments calculated?

Dairy farmer Glenda operates a farm with 50 cows and 1,000,000 pounds of enrolled milk production. Glenda followed the advice of her FSA office and purchased coverage for 95% of milk at the \$9.50 level for 2024, paying \$1,425 for coverage.

- In January 2024, the margin was \$8.48
- The payment per hundredweight is $\$9.50 - \$8.48 = \$1.02$
- DMC allocates production evenly across months:
 - $950,000/12 = 79,166.67$ pounds per month
- Pounds per month converted to hundredweight:
 - $79,166.67/100 = 791.67$
- Total hundredweights multiplied by payment amount:
 - $791.67 \times \$1.02 = \807.50

- DMC payment is \$807.50

University of Wisconsin Dairy Markets – DMC Assessment Tool - 2024

Select Year: ▼

Annual Historic Production ⁱ

Coverage Percentage: ▼

Tier 1 Coverage Level:

Tier 2 Coverage Level:

Coverage Choice (\$/Level)	Coverage Choice (\$/cwt)	Covered Prod History (lbs)	Total Premium (\$/cwt)
\$9.50	\$0.1500	950,000	\$1,425.00
\$8.00	\$1.8130	0	\$0.00
		950,000	\$1,425.00

MONTH	ACTUAL / FORECASTED MARGIN	TIER 1 COVERED PRODUCTION HISTORY (LBS)	TIER 2 COVERED PRODUCTION HISTORY (LBS)	TIER 1 FORECASTED PAYMENT PER CWT	TIER 2 FORECASTED PAYMENT PER CWT	TOTAL PAYMENT
Jan	\$8.48	79,166.667	0	\$1.02	\$0.00	\$808.00
Feb	\$9.44	79,166.667	0	\$0.06	\$0.00	\$46.00
Mar	\$10.23	79,166.667	0	\$0.00	\$0.00	\$0.00
Apr	\$9.76	79,166.667	0	\$0.00	\$0.00	\$0.00
May	\$10.07	79,166.667	0	\$0.00	\$0.00	\$0.00
Jun	\$10.39	79,166.667	0	\$0.00	\$0.00	\$0.00
Jul	\$10.82	79,166.667	0	\$0.00	\$0.00	\$0.00
Aug	\$11.37	79,166.667	0	\$0.00	\$0.00	\$0.00
Sep	\$11.94	79,166.667	0	\$0.00	\$0.00	\$0.00
Oct	\$12.46	79,166.667	0	\$0.00	\$0.00	\$0.00
Nov	\$12.56	79,166.667	0	\$0.00	\$0.00	\$0.00
Dec	\$12.40	79,166.667	0	\$0.00	\$0.00	\$0.00
2024	\$10.83	950,000	0	\$0.09	\$0.00	\$854.00

<https://dmc.dairymarkets.org/#/>

University of Wisconsin Dairy Markets – DMC Assessment Tool - 2023

Select Year: 2023

Annual Historic Production ⁱ 1,000,000

Coverage Percentage: 95%

Tier 1 Coverage Level: \$9.50

Tier 2 Coverage Level: \$8.00

Coverage Choice (\$/Level)	(\$/cwt)	Covered Prod History (lbs)	Total Premium (\$/cwt)
\$9.50	\$0.1500	950,000	\$1,425.00
\$8.00	\$1.8130	0	\$0.00
		950,000	\$1,425.00

MONTH	ACTUAL / FORECASTED MARGIN	TIER 1 COVERED PRODUCTION HISTORY (LBS)	TIER 2 COVERED PRODUCTION HISTORY (LBS)	TIER 1 FORECASTED PAYMENT PER CWT	TIER 2 FORECASTED PAYMENT PER CWT	TOTAL PAYMENT
Jan	\$8.08	79,166.667	0	\$1.42	\$0.00	\$1,123.00
Feb	\$6.19	79,166.667	0	\$3.31	\$1.81	\$2,623.00
Mar	\$6.08	79,166.667	0	\$3.42	\$1.92	\$2,706.00
Apr	\$5.84	79,166.667	0	\$3.66	\$2.16	\$2,901.00
May	\$4.83	79,166.667	0	\$4.67	\$3.17	\$3,699.00
Jun	\$3.65	79,166.667	0	\$5.85	\$4.35	\$4,630.00
Jul	\$3.52	79,166.667	0	\$5.98	\$4.48	\$4,731.00
Aug	\$6.47	79,166.667	0	\$3.03	\$1.53	\$2,399.00
Sep	\$8.44	79,166.667	0	\$1.06	\$0.00	\$836.00
Oct	\$9.44	79,166.667	0	\$0.06	\$0.00	\$45.00
Nov	\$9.58	79,166.667	0	\$0.00	\$0.00	\$0.00
Dec	\$8.34	79,166.667	0	\$1.16	\$0.00	\$915.00
2023	\$6.71	950,000	0	\$2.80	\$1.62	\$26,608.00

<https://dmc.dairymarkets.org/#/>