Maryland Dairy Industry Oversight and Advisory Council

2025 Annual Report

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Summary

The Maryland Dairy Industry Oversight and Advisory Council (MDIOAC) has submitted its annual report to the Governor, outlining the current state of the dairy industry and providing recommendations for its future. The council, which is charged with improving and sustaining the economic viability of Maryland's dairy industry, represents a broad spectrum of stakeholders, including farmers, milk processors, cooperative leaders, and representatives from various state agencies and academic institutions.

State of the Industry

The dairy industry, both in Maryland and nationally, faces significant pressures that impact its profitability and sustainability. These challenges include fluctuating milk prices that are often below the cost of production and steadily rising input costs for feed, fuel, and labor. These factors have led to a continued decline in the number of Maryland dairy farms, falling from 505 a decade ago to just 283 as of October 1, 2025.

In 2024, Maryland's dairy farms generated $197 million in sales. The industry is critical to the state's agricultural landscape, using approximately 200,000 acres of cropland to feed its 40,000 milk cows. The report notes that the potential demise of the dairy sector would be difficult to offset, leading to a loss of agricultural diversity, jobs, and economic activity.

While Maryland has not had any detected cases of Highly Pathogenic Avian Influenza (HPAI) H5N1 in dairy herds, the state's dairy sector remains on alert. The Maryland Department of Agriculture (MDA) and the Maryland Department of Health (MDH) have been actively monitoring the situation and taking precautionary measures to prevent its spread.

Maryland's dairy processing sector is growing, with 58 operations—an increase of 14 since 2024 as the Maryland Department of Health now includes frozen dessert processors and dairy farms that leverage out-of-state processing for value added products. These processors handle over 10 billion pounds of milk annually. One notable example is the Nestle Dreyer's Ice Cream plant in Laurel, which is among the largest ice cream factories in the world.

Recommendations to the Governor and General Assembly

The MDIOAC's report includes five key recommendations to support Maryland's dairy industry:

1. **Maintain the Prohibition of Raw Milk Sales For Human Consumption:** The Council recommends that the state continue to prohibit the direct sale of raw milk to consumers. The recommendation is based on scientific evidence of the health risks associated with raw milk and the proven effectiveness of pasteurization in reducing pathogens.
2. **Promote the Dairy Industry:** The report urges the MDA and other state entities to promote the value of the dairy industry to the public. It suggests continued collaboration with programs like Maryland Public Television's *Maryland Farm & Harvest* and the "Farm to School" initiative.
3. **Oppose Mislabeling of Plant-Based Beverages:** The Council recommends that Maryland's leadership support federal legislation like the **DAIRY PRIDE Act** to ensure that plant-based

beverages are not marketed as "milk," which could confuse consumers and undermine the dairy industry.

4. **Increase Access to Flavored and Full-Fat Milk in Schools:** Citing research that links full-fat milk consumption to lower childhood adiposity, the report recommends increasing the availability of flavored and full-fat milk in schools to boost consumption among children.
5. **Simplify Regulations for Value-Added Agriculture:** The Council advises the state to simplify and reduce environmental regulatory hurdles for farmers pursuing value-added ventures such as on-farm cheese or ice cream production, direct-to-consumer sales, and livestock boarding. This support would encourage a more diverse and resilient agricultural sector.

Attachment 1
Maryland Dairy Economics Report

Dale Johnson
Department of Agricultural and Resource Economics, University of Maryland

Introduction

Dairy production is a significant agriculture enterprise in Maryland, generating an annual average gross milk income of approximately $170,000,000 from 2015 to 2024. The relative importance of the dairy industry can be seen when comparing it to the value of production of other Maryland agricultural enterprises in Table 1.

Table 1. Maryland Agriculture Enterprise Value of Production Measured in Millions of Dollars.

Year	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	15-24 avg.
Broilers	931	885	1,001	971	891	669	913	1,487	1,249	1,458	1,045
Corn grain	242	246	282	228	318	373	475	423	356	245	319
Soybeans	188	199	232	199	175	254	365	298	272	203	238
Dairy milk	173	156	169	149	153	152	157	214	185	197	170
Beef cattle	99	82	63	72	96	67	87	93	96	124	88
Hay	93	93	78	91	80	68	67	71	89	104	83
Wheat	79	67	60	62	61	62	93	105	84	69	74
Egg production	99	31	44	61	33	40	37	93	104	122	66
Hogs	7	6	6	7	6	6	8	8	7	NA	7

Dairy production is particularly important in central and western Maryland counties, where it is concentrated because it is a value-added product that utilizes corn grain/silage, soybean meal, and hay. This increases the importance of those field crops that generate open space. It requires about 200,000 acres of cropland to generate feed for the approximately 40,000 milk cows and replacement heifers. It is unlikely that the demise of the dairy industry would be offset by other value-added agricultural enterprises and would result in a loss of agriculture diversity and the associated jobs and economy.

However, dairy production is contracting. Since 2015, about 163 of the 443 dairy farms (37 percent) have ceased operation. Table 2 details the statistics of the Maryland dairy industry. Some of the cows from these farms are picked up by other Maryland farms as the average size of farm has gone from 111 cows to 143 cows. But the number of cows over this period has declined from 49,000 to 40,000. The gross income from milk is highly variable because of the wide swing in milk prices from $16.20 a hundredweight (cwt) to $25.60/cwt. (Hundredweight is 100 pounds of milk. A gallon of milk weighs approximately 8.6 pounds.)

Table 2. 2015-2024 Dairy statistics

Year	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024
Number or Dairy farms	443	424	411	381	348	339	325	310	300	280
Cows per farm	111	113	117	118	124	124	125	132	133	143
Total number of cows	49,000	48,000	48,000	45,000	43,000	42,000	42,000	41,000	40,000	40,000
Total lbs milk per cow	20,143	20,021	19,917	20,556	19,535	20,976	20,857	20,537	21,150	21,000
Total lbs milk production	987,000,000	961,000,000	956,000,000	925,000,000	840,000,000	881,000,000	876,000,000	842,000,000	846,000,000	819,000,000
Lbs fed to calves	6,000,000	7,000,000	7,000,000	7,000,000	7,000,000	7,000,000	7,000,000	7,000,000	7,000,000	7,000,000
Lbs milk home consumption	1,000,000	1,000,000	1,000,000	1,000,000	1,000,000	1,000,000	1,000,000	1,000,000	1,000,000	1,000,000
Pounds of milk sold	980,000,000	953,000,000	948,000,000	917,000,000	832,000,000	873,000,000	868,000,000	834,000,000	838,000,000	811,000,000
Prices received/cwt (1)	$17.60	$16.40	$17.80	$16.20	$18.40	$17.40	$18.10	$25.60	$21.90	$24.00
Gross income (2)	$172,656,000	$156,456,000	$168,922,000	$148,716,000	$153,272,000	$152,076,000	$157,289,000	$213,760,000	$183,741,000	$194,880,000
Value of milk produced (3)	$173,712,000	$157,604,000	$170,168,000	$149,850,000	$154,560,000	$153,294,000	$158,556,000	$215,552,000	$185,274,000	$196,560,000

USDA National Agricultural Statistics Service, Maryland Department of Agriculture

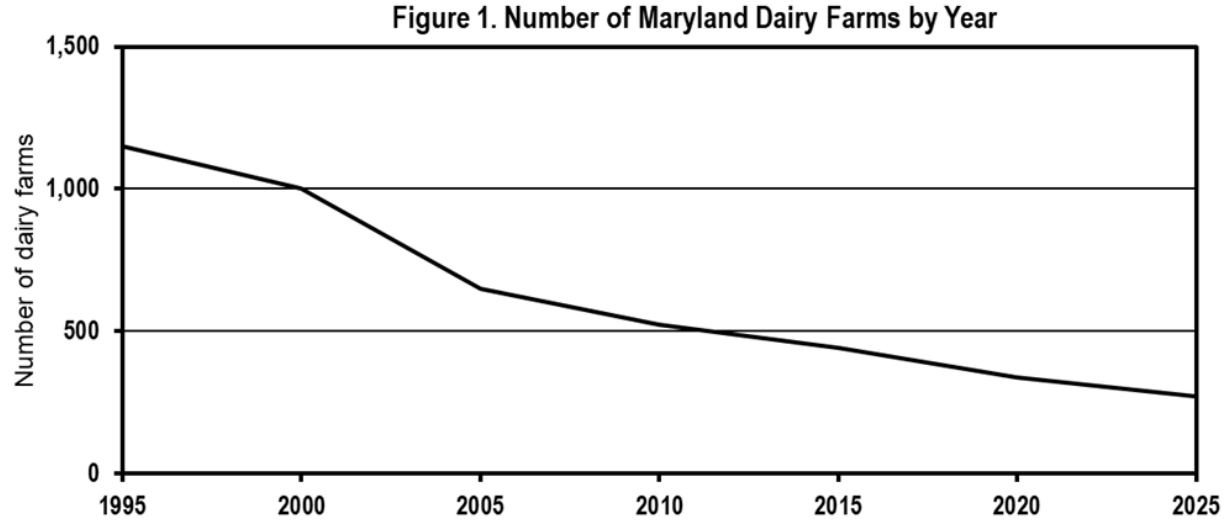
(1) Prices received for all milk sold wholesale per cwt.

(2) Includes value of milk used for home consumption

(3) includes value of milk fed to calves

Long term decline of dairy farms

There has been a long-term decline in the number of Maryland dairy farms, as seen in Figure 1.



This trend mirrors the decline of the number of dairy farms in the United States. Table 3 shows the number of dairy farms declining from a total of 155,339 in 1992 to 24,082 in 2022 as reported in the USDA Census of Agriculture. Most of the farms exiting were small farms with less than 200 cows. As small farms go out of business, the cows are absorbed by large farms which can be seen in Table 4. In 1992, 68.4 percent of the cows resided on farms with fewer than 200 cows. In 2022, 64.8 percent of the cows resided on farms with 1,000 cows or more.

Table 3. United States

Number of Dairy Farms by Herd Size

Herd size	1992	2022
1-199	148,993	16,960
200-499	4,652	3,671
500-999	1,130	1,438
>999	564	2,013
Total	155,339	24,082

Source: USDA Census of Agriculture

Table 4. United States

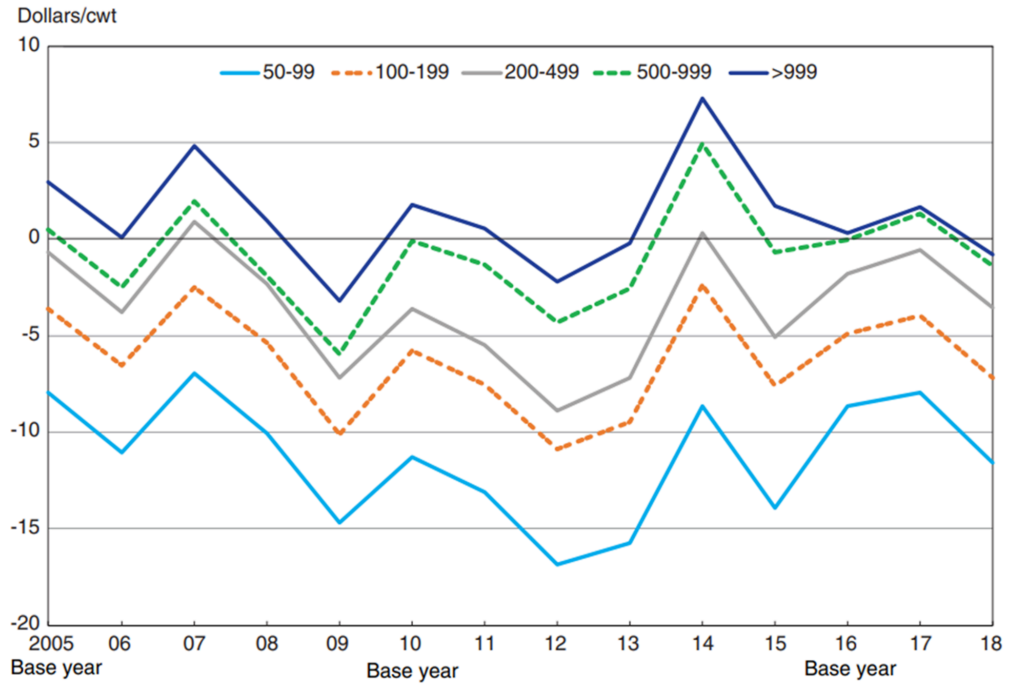
Percent of cow inventory

Herd size	1992	2022
1-199	68.4	12.6
200-499	13.7	12.3
500-999	8.0	10.3
>999	9.9	64.8
Total	100	100

The main reason for this shift in milk production from small farms to large farms lies in increased profitability on large farms. Figure 2 illustrates the net return by herd size from 2005-2018. In only two of those years (2007 and 2014) did farms with fewer than 500 cows break even. These are average returns in each herd size. There is variability within the herd sizes, so some farms within a herd size have higher net returns than other farms within the herd size. Some small farms may consistently show profits from efficient production, while most small farms generate losses. This is reflected in the loss of small farms as shown above. The decline of dairy farms in Maryland is largely due to the size structure.

Figure 2.

Net returns by herd size, 2005-2018



Consolidation in U.S. Dairy Farming, James M. MacDonald, Jonathan Law, and Roberto Mosheim, USDA ERS

Milk prices

Table 5 shows that Maryland farm milk prices per cwt have been higher in the past three years ($23.83 average) than in the previous seven years ($17.41 average). The 2025 Maryland average price through August is 22.94.00 (ERS USDA August).

Table 5. 2015-2024 Average milk prices in dollars pewr CWT

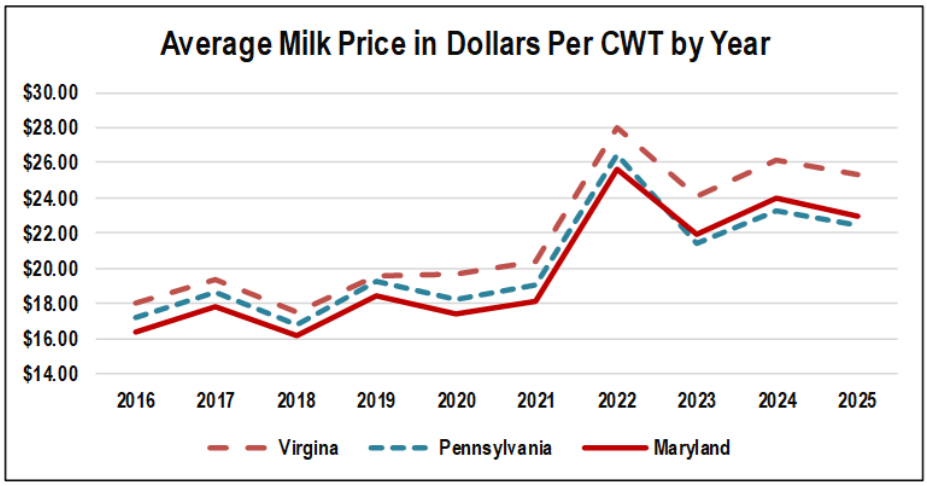
Year	2015	2016	2017	2018	2019	2020	2021	15-21 avg.	2022	2023	2024	22-24 avg.
Prices received/cwt	$17.60	$16.40	$17.80	$16.20	$18.40	$17.40	$18.10	$17.41	$25.60	$21.90	$24.00	$23.83

It is even revealing to look at regional milk prices. Table 6 and its associated graph show average milk prices per cwt for Virginia, Pennsylvania, and Maryland from 2016 to 2025. The average Maryland price over this period is $1.95 per cwt below the Virginia price and $0.41 per cwt below the Pennsylvania price. However, Maryland milk prices have been higher than Pennsylvania prices for the past four years. Milk pricing structures in Virginia have given dairy farmers an advantage over Maryland and Pennsylvania farmers in recent years. Virginia maintains a Milk Commission, which regulates milk price structure. https://www.vdacs.virginia.gov/food-state-milk-commission.shtml. Pennsylvania also has a Milk Commission that sets minimum prices (Pennsylvania Milk Board | Commonwealth of Pennsylvania). Maryland does not have any state controls on pricing.

Table 6. Average Milk Price Per CWT by Year

State/Year	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	Average
Virgina	$ 18.00	$ 19.40	$ 17.50	$ 19.60	$ 19.70	$ 20.40	$ 28.00	$ 24.10	$ 26.20	$ 25.34	$ 21.82
Pennsylvania	$ 17.20	$ 18.60	$ 16.80	$ 19.30	$ 18.20	$ 19.10	$ 26.50	$ 21.40	$ 23.30	$ 22.49	$ 20.29
Maryland	$ 16.40	$ 17.80	$ 16.20	$ 18.40	$ 17.40	$ 18.10	$ 25.60	$ 21.90	$ 24.00	$ 22.94	$ 19.87

USDA National Agricultural Statistics Service



Changes to U.S. Federal Milk Marketing Orders

Changes to U.S. Federal Milk Marketing Orders (FMMOs) took effect on June 1, 2025, modernizing milk pricing formulas to reflect current market conditions and production realities, with some changes finalized on December 1, 2025. Key changes include using the higher of Class III or IV prices for Class I base pricing, updated milk composition factors reflecting higher protein content, and the

removal of 500-pound barrel cheddar prices from the Class III formula. These comprehensive reforms, approved by dairy farmers in all 11 federal orders, aim to provide more stable farm income and a more accurate pricing system.

Changes to milk marketing order pricing create winners and losers among dairy farms due to varying impacts on prices and market dynamics. There seems to be consensus that dairy farms in the Northeast and Mid-Atlantic will benefit. Producers in Class III (cheese) or Class IV (manufactured products) markets with high-priced milk, can face losses or gains depending on the formula used for setting the base Class I price.

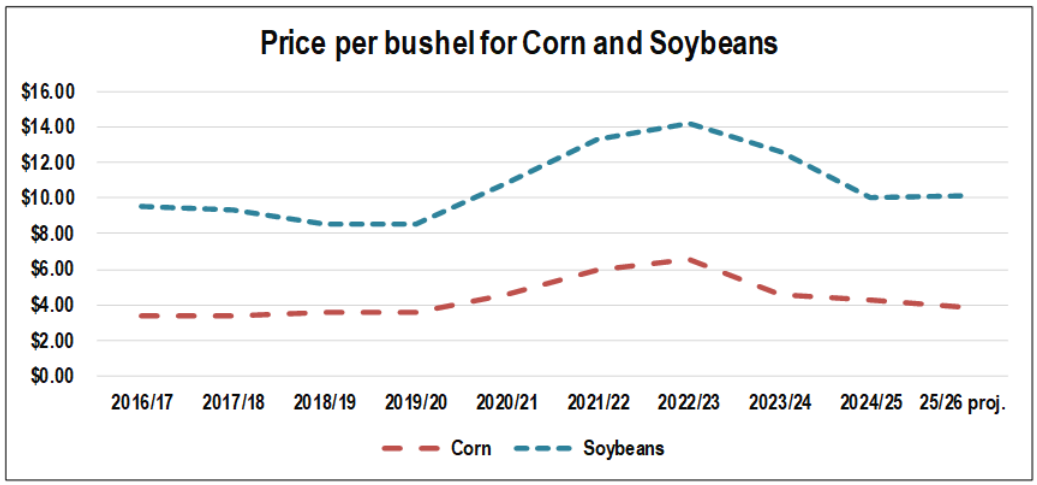
Feed prices

Feed is one of the main costs of producing milk, whether it is the opportunity cost of farm-produced feeds or the actual costs of purchasing feed. Table 7 shows the national average prices for the two main ingredients in dairy feed concentrates, corn and soybeans. Except for the marketing years 2021/2022 and 2022/2023, corn and soybean prices have been favorable for dairy farmers, and they are forecast to be favorable through the 2025/2026 marketing year. Analysts of the dairy farm sector began to put more attention on the threat of high feed costs. Dairy subsidy programs, which for decades had operated with the intention of keeping milk prices high, were modified to make payments based on a combination of relatively low milk prices and relatively high feed prices.

Table 7. Average Corn and Soybean Price by Marketing Year

Marketing year*	2016/17	2017/18	2018/19	2019/20	2020/21	2021/22	2022/23	2023/24	2024/25	25/26 proj.	Average
Corn	$3.36	$3.36	$3.61	$3.56	$4.53	$6.00	$6.54	$4.55	$4.30	$3.90	$4.37
Soybeans	$9.47	$9.33	$8.48	$8.57	$10.80	$13.30	$14.20	$12.60	$10.00	$10.10	$10.69

USDA World Agriculture Demand and Supply Estimates *Marketing year is September 1 - August 31



Land Prices

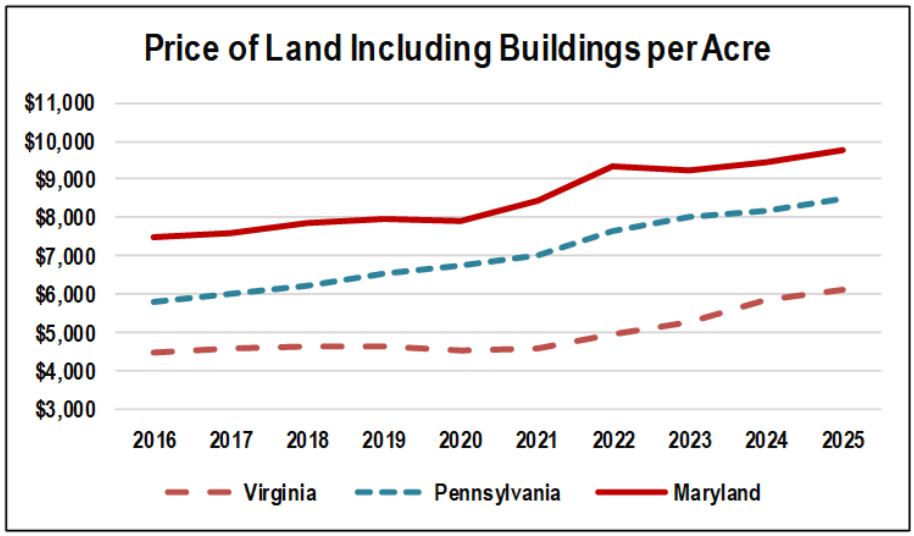
Other economic forces work to the detriment of Maryland dairy farms. The price of farmland and buildings in Maryland is much higher than in Pennsylvania and Virginia, as illustrated in Table 8 and its associated graph. While higher land values increase a farm owner's net worth and provide more collateral to borrow against, it makes it more difficult to buy additional land to expand operations. It also makes it almost impossible for young farmers to get into dairy farming since a dairy operation cannot financially

or economically justify the land values inflated from development encroachment in a rapidly urbanizing state.

Table 8. Price of land including buildings per acre for Maryland, Pennsylvania, and Virginia

	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	Average
Virginia	4,470	4,590	4,620	4,620	4,550	4,600	4,950	5,300	5,850	6,100	4,965
Pennsylvania	5,820	6,030	6,250	6,540	6,740	7,020	7,660	8,020	8,160	8,490	7,073
Maryland	7,470	7,620	7,860	7,990	7,930	8,430	9,350	9,260	9,470	9,750	8,513

USDA National Agricultural Statistics Service



Farm Level Economics

From 1994 to 2021, Dale Johnson collected farm-level data on income and expenses from Maryland dairy farmers. This was done through farm visits so that Johnson did not have to take possession of confidential, personal, tax, and accounting information. This typically occurred during March to May, after taxes have been filed and before farmers begin work in the fields.

The table below illustrates the income, expenses, and profit per hundred pounds (CWT) of milk produced by 25 dairy farms (18 non-organic and 7 organic) for the years 2018-2020. The average cost of production for non-organic farms for the years 2018-2020 is $20.41 per cwt (line 19). This does not include operator and family labor (family living) and debt principal payments. The average milk price per cwt for the same time period is $17.46 (line 4). This is $2.95 below the cost of production. While farmers have cattle sales and other income, which help return a profit, the profit is inadequate for many farms. For example, the average total profit per farm is $56,809 (line 21). Out of this profit, farmers must extract family living (often more than one family) and debt principal payments (land, equipment, livestock, and operating debt), which often results in a negative cash flow. There is a wide variability in farm financial performance, and some farms are worse off than others. The third column under non-organic farms shows that the least profitable 9 non-organic farms have a higher cost of production of $21.15/cwt (line 19) than the average and lower income than average of $21.84/cwt (line 7). They barely break even at $0.70/CWT (line 20) or $15,755/farm (line 21) before family living, and debt principal payments are extracted.

The economics of organic farms are very different. Organic farms tend to be smaller at 86 cows compared to 134 (line 1). The production per cow is lower at 90 cwt/cow compared to 207 cwt/cow (line 2) because of several factors, including cattle breed and feeding systems that rely primarily on pasture. Milk price is higher at $33.80/cwt compared to $17.46/cwt (line 4). Costs are also higher at $31.69/cwt compared to 20.41/cwt (line 19). Profit per hundredweight is higher at $9.48/cwt compared to $2.05/cwt (line 20). During this period, the 7 organic farms did much better than the average non-organic farms. In comparing profit per farm, the organic farms' average profit per farm of $75,777 was much higher than the average profit for non-organic farms of $56,809 (line 21). However, organic production is not an option for most dairy farms. Most organic cooperatives are not taking on new farms. Some organic cooperatives have limited the amount of milk on which they will pay an organic premium.

	2018-2020 Average of Maryland Dairy Farms	Conventional (Non-Organic) Farms			Organic
	Income, Expenses, and Profit per CWT	Total 18 Farms	High 9 Farms	Low 9 farms	7 Farms
1	Average number of cows	134	158	112	86
2	CWT of milk sold per cow	207	212	201	90
3	Farm income				
4	Milk sales	17.46	17.84	16.97	33.80
5	Cattle sales	1.23	1.11	1.39	3.56
6	Other income	3.77	3.99	3.49	4.12
7	Total income	22.46	22.94	21.84	41.48
8	Farm expenses				
9	Feed purchased	5.81	5.58	6.12	10.40
10	Seed, fertilizer, chemicals	2.17	2.32	1.96	2.02
11	Depreciation and repairs	3.17	3.39	2.88	6.40
12	Labor	0.84	0.80	0.89	0.62
13	Medical and breeding	0.92	0.75	1.14	0.51
14	Car, Truck, Fuel, Hauling	1.92	1.95	1.88	2.29
15	Rent	1.01	0.98	1.05	1.62
16	Interest	0.75	0.62	0.93	1.10
17	Custom hire	1.32	1.15	1.55	1.90
18	Other expenses	2.49	2.31	2.73	4.83
19	Total Expenses	20.41	19.85	21.15	31.69
20	Profit per CWT	2.05	3.08	0.70	9.79
21	Net profit per farm	56,809	102,996	15,755	75,777

Appendix 2
Maryland Dairy Processing Facility Report, 2025
Maryland Department of Health

County	Entity Name	City
Baltimore City	Atwater's	Baltimore
Prince Georges	Bionat Foods	Beltsville
Harford	Blue Star Farm LLC	White Hall
Harford	Broom's Bloom Dairy	Bel Air
Montgomery	Brown Cow Creamery	Mount Airy
Washington	Caprikorn Farms LLC	Gapland
Garrett	Casselman Creamery	Grantsville
Talbot	Chapel's Country Creamery	Easton
Washington	Cheese Goatees	Hagerstown
Worcester	Chesapeake Bay Dairy	Pocomoke
Cecil	Chesapeake Gold Farms	Northeast
Baltimore	Chill Solutions	Owings Mills
Washington	Clear Spring Creamery	Clear Spring
Saint Mary’s	Clover Hill Dairy	Mechanicsville
Baltimore City	Cloverland Farms Dairy	Baltimore
Harford	Daily Crisis Farm	White Hall
Frederick	Dairy Maid Dairy LLC	Frederick
Washington	Deliteful Dairy	Williamsport
Kent	Dogwood Lane Dairy	Worton
Worcester	Dumser’s Dairy Inc	Ocean City
Kent	Eve's Cheese	Chestertown
Kent	Fawn Wood Farm	Chestertown
Garrett	Firefly Farms	Accident
Baltimore City	Frumex Paletas LLC	Baltimore
Montgomery	Gemma Gelato	Rockville
Frederick	Glamour View Creamery	Walkersville
Baltimore City	Good Karma Creamery	Baltimore
Frederick	Grossnickle Farms	Walkersville
Worcester	Island Creamery Berlin	Berlin
Prince Georges	Italian Kitchen LTD	Bladensburg

Harford	Keyes Creamery	Aberdeen
Wicomico	La Veracruzana Paleteria LLC	Salisbury
Garrett	Lakeside Creamery	Oakland
Washington	Lanco Dairy Farms Coop LLC	Hancock
Prince Georges	Maola Dairy	Landover
Howard	Maryland & Virginia Milk Producers	Laurel
Allegany	Meadow Mountain Nutritional Inc	Frostburg
Washington	Misty Meadow Farm Creamery	Smithsburg
Prince George’s	Moby Dick House of Kabob	Hyattsville
Frederick	Moo Cow Creamery @ Walnut Ridge Farm	Middletown
Howard	Dreyer’s Ice Cream Co	Laurel
Caroline	Nice Farms Creamery	Federalsburg
Prince Georges	P.A. Bowen Farmstead	Brandywine
Washington	Palmyra Farmstead Cheese LLC	Hagerstown
Baltimore	Pitango Gelato Plant	Glen Arm
Worcester	Popce's Homemade Ice Cream	Ocean Pines
Montgomery	Potomac Ice Cream LLC	Gaithersburg
Baltimore	Prigel Family Creamery	Glen Arm
Allegheny	Queen City Creamery & Deli LLC	Cumberland
Montgomery	Sacred Mountain LLC, DBA Moorenko's Ice Cream	Silver Spring
Frederick	Saputo USA	Frederick
Frederick	South Mountain Creamery LLC	Middletown
Baltimore City	Taharka Brothers Ice Cream	Baltimore
Baltimore	The Charmery Ice Cream	Baltimore
Talbot	The Scottish Highland Creamery	Oxford
Prince Georges	Tito’s Ice Cream	Hyattsville
Carroll	Whispering Breeze Creamery	Taneytown
Montgomery	York Castle Ice Cream Co Inc	Beltsville