

MONTANA BOARD OF MILK CONTROL
MARKET ADMINISTRATION & INDUSTRY REPORT
FISCAL YEAR 2024
ENDED JUNE 30, 2024

November 2024

MONTANA DEPARTMENT OF LIVESTOCK
MILK CONTROL PROGRAM

MICHELE SATRE

MONTANA BOARD OF MILK CONTROL
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EXECUTIVE SUMMARY

The purpose of the Milk Control Program collecting and reporting information on Montana's milk industry is to provide insights and objective quantitative information to the Board of Milk Control to assist the board in monitoring and understanding the industry to support policy development and deliberations.

The Milk Control Act (act) (Title 81, chapter 23, MCA) requires the board to supervise, regulate, and control the milk industry. The act requires the Montana Department of Livestock to assist in investigating matters, to bring proceedings to enforce orders of the board, and to provide staff to assist in technical, enforcement, and regulatory activities.

The act contains specific provisions enacted to support its policy goals of which some are:

- mandatory licensing of businesses that produce or distribute milk in Montana
- assessments to fund the administration and enforcement of the act
- establishment of minimum prices to be paid for raw milk according to how the milk is utilized, referencing federal milk classifications
- authorization for a quota plan and a statewide pooling arrangement
- governance of fair-trade practices, pertaining to the transaction of business among licensees
- expression of legislative intent that milk produced outside of state is subject to the act the instant that the milk is subject to regulation by the state
- statement that the act does not supersede or interfere with federal law regulating interstate commerce.

Minor actions transpired for the Board, the Producer Committee, and the Program in Fiscal Year 2024. The Board held two public meetings. One to discuss Fiscal Year 2025 Milk Control assessment rates and one to appoint Producer Committee members for Calendar Years 2024 - 2025. The Producer Committee held two meetings to vote on quota transfers. (Details pages 4-5.)

Historically, most of the milk produced in Montana is utilized as fluid milk consumed in Montana. In Fiscal Year 2024, Montanans continued with this trend with a majority of the fluid milk consumed originating from Montana processing plants using milk supplied by Montana producers. The next largest use of Montana-origin milk was ice cream type products, followed by Class II fluid cream products, and finally a small percentage other dairy products. (Details pages 7-11)

The program began preparing dairy consumption estimates beginning with Fiscal Year 2015. These estimates measure the Montana consumption trends of: Class I fluid products, fluid cream type products, yogurt, and butter. The Fiscal Year 2024 Montana consumption comparison to Fiscal Year 2023 Montana consumption indicates: Class I fluid products had a modest increase, fluid cream type products increased significantly, ice cream type products had a notable increase, yogurt had a notable increase as well, while butter did the opposite and had a notable decrease. (Details pages 7-11.)

In Fiscal Year 2024 the Montana pooling dairies' production decreased from the previous fiscal year. This decrease continued the marked decline which started in Fiscal Year 2019. This was the result of a decline in licensed dairies, which decreased the number of dairy cows being milked. (Details pages 20-23.)

In Fiscal Year 2024 Montana had a net increase in exported milk, which consisted of a noteworthy increase in Class I packaged fluid milk and a significant decrease in bulk raw milk. The net increase can be attributed to a decrease in demand for distributor products in Montana. (Details page 24-25.)

Montana's pool marketing system enables producers to receive uniform milk prices (for milk of equivalent butterfat content) based on the overall utilization of pool milk received by Montana's pool handlers. In Fiscal Year 2024, the 36 pool dairies had a noticeable decrease in production. Accompanying this decrease was a decrease in the average announced price, which resulted in a significantly lower average pool price. (Details pages 26-28.)

The value of pool milk is determined by production and utilization factors. The utilization factors are related to the sale of surplus milk (milk in excess of pool handler's Montana Class I and Class II needs) and to transportation charges absorbed by pool producers for shipments of unprocessed pool milk between pool plants.

Utilization Factors

Two major elements of utilization factors are (1) the minimum prices for each of the three classes of milk and (2) the percentage of butterfat and skim milk (the portion of milk that is not butterfat) utilized in each class of milk. Minimum prices are highest for pool milk utilized as Class I milk consumed in Montana, this accounted for over half of pool production in Fiscal Year 2024, decreasing slightly from Fiscal Year 2023. The percentage of pool milk utilized as Class I milk consumed in Montana was slightly over half of pool production in Fiscal Year 2015 and has fluctuated slightly each fiscal year up to the current fiscal year, with the average remaining at just slightly over half of pool production. (Details pages 31-37.)

Adjustments to Utilization Value

In Fiscal Year 2024 adjustments were made to the utilization value of producer milk for transportation charges to ship unprocessed pool milk between pool plants (primarily to the pool plant in Billings from the pool plant in Great Falls) and for surplus milk sales, which is surplus milk produced in Montana that is not consumed in Montana. These adjustments reduced the Fiscal Year 2024 pool utilization value slightly above a dollar per hundred weight. (Details pages 38-41.)

MILK MARKET ADMINISTRATION

MILK CONTROL ACT PRIMER

Policy Purpose

The act provides for the regulation of the milk market in Montana. The act establishes that regulation of milk is in the public interest because milk is a necessary food article; adequate supply is vital to the public; and health regulations do not provide for adequate supply. The act specifies that it is a policy of the state to stabilize the marketing of milk and promote, foster, and encourage intelligent production and orderly marketing of milk dairy products; elimination of speculation and waste; and making the distribution between producer and consumer as direct as can be efficiently and economically done.

The act's policy statement declaration in § 81-23-102, MCA, includes, but is not limited to, the following summarized statements. The policy declaration has not substantively changed since 1939.

- Past experience shows that when regulation does not provide for an orderly and profitable marketing of milk, the credit status of producers and distributors is adversely affected, resulting in broader economic damage.
- The unique nature of milk lends itself to regulation. Milk is a highly perishable commodity that is easily contaminated. It cannot be stored for a great length of time and must be produced and distributed fresh daily.
- The supply of milk is variable but must be produced on a uniform and even basis and yet accommodate fluctuating demand; therefore, a surplus of milk must be available to guarantee adequate supply to the public. Maintaining this surplus can be expensive; unless regulated, the unavoidable surplus can undermine the milk industry by causing producers to relax their diligence in complying with health and sanitary provisions.
- The natural law of supply and demand has been found inadequate to protect the industry. In the past, the adequacy of supply has been threatened by market conditions and trade practices within the industry.
- The supply and quality of milk are affected negatively unless the producers are guaranteed and ensured a reasonable profit on milk.

Elements of the Milk Control Act

The act describes its policy purpose and authorizes necessary regulatory infrastructure. The act provides powers to the board to supervise, regulate, and control the milk industry. The act requires the Montana Department of Livestock to provide staff to the board to assist in investigating matters; bring proceedings to enforce orders of the board; and assist in technical, enforcement, and regulatory activities.

The act includes several specific provisions. Among these are the following:

- mandatory licensing of businesses that produce or distribute milk in Montana,
- assessments to fund the administration and enforcement of the act,

- establishment of minimum prices to be paid for raw milk according to how the milk is utilized, referencing federal milk classifications,
- authorization for a quota plan and a statewide pooling arrangement,
- governance of fair-trade practices, setting forth four specific trade practices: prohibitions against secret rebates and discounts; gifts to secure fluid milk and cream business; offering special prices to customers not available to all customers who purchase under like terms/conditions; and payment (by a distributor to a producer) of a price lower than applicable producer price,
- expression of legislative intent that milk produced outside of the state is subject to the act the instant that the milk is subject to regulation by the state, and
- statement that the act does not supersede or interfere with federal law regulating interstate commerce.

BOARD OF MILK CONTROL – ACTIVITY IN FISCAL YEAR 2024

The following table shows information about the board members and their terms of appointment. Appendix A provides additional information about the board, its interaction with the Montana Department of Livestock, and differentiation of the roles of the department’s Milk Control Program and the Milk & Egg Section.

Montana Board of Milk Control - Members

Name	Board Position	Residence	Term
Ken Bryan	Chair	Great Falls	1/2021 – 1/2023*
Brian C. Beerman	Member	Fairfield	1/2021 – 1/2025
Staci Ketchum	Member	Miles City	1/2021 – 1/2025
W. Scott Mitchell	Member	Billings	1/2021 – 1/2023*
Travis Stroh	Member	Glendive	1/2021 – 1/2025
*Acting board member. No legislative action to appoint members in 2023 Session			

The Board of Milk Control can be reached through the contact information listed below.

Milk Control Program
 P.O. Box 202003
 Helena, MT 59620-2003
 (406) 444-2875 or LivMilkControl@mt.gov

January 24, 2024, Meeting - The Board met to discuss the Milk Control assessment rates for Fiscal Year 2025. The board voted to keep the rate at the Fiscal Year 2024 rate of \$0.0215/cwt with the intention of preserving a reliable cash balance for the Milk Control Program.

June 03, 2024, Meeting - The Board met with the purpose of appointing the Producer Committee members for the Calendar Year 2024 – 2025 term. The Board voted and appointed Nelson Kamerman – Dairyland Farms, David Lewis – Big Creek Dairy, Mark Kleinsasser – Mountain View Colony Dairy, Sam Hofer – Surprise Creek Colony, John Waldner - Fairhaven Colony, Gary Wurz – Big Stone Colony, and Shane Leep – Leep Dairy for the term. The Board voiced their appreciation for their willingness to serve.

PRODUCER COMMITTEE – ACTIVITY IN FISCAL YEAR 2024

The producer committee is provided for by ARM 32.24.506. The committee reviews and approves transfers of quota and is authorized by rule to take over the responsibility from pool handlers of selling surplus milk that is sold unprocessed in bulk. Pool handlers may also relinquish the responsibility to market bulk surplus milk to the Committee.

The following table shows the current Producer Committee members elected by the Board of Milk Control for the Calendar Year 2024 – 2025 term.

Producer Committee Members 2024 – 2025 Term:

Producer Name	Committee Position	Pool Plant Receiving Milk	Dairy Name
Nelson Kameran	Member	Darigold – Bozeman	Dairyland Farms
Sam Hofer	Member	Meadow Gold – Great Falls	Surprise Creek Colony Dairy
Mark Kleinsasser	Member	Meadow Gold – Billings	Mountain View Colony Dairy
Shane Leep	Member	Meadow Gold - Billings	Leep Dairy
John Waldner	Member	Meadow Gold – Great Falls	Fairhaven Colony Dairy
Gary Wurz	Member	Meadow Gold – Great Falls	Big Stone Colony
Dave Lewis	Member	Darigold – Bozeman	Big Creek Dairy

August 18, 2023, Producer Committee - The committee met via conference call to vote on a quota transfer request. The transfer was approved, with the mandated forfeiture of 10% of the quota balance to be removed from the quota pool.

September 18, 2023, Producer Committee - The committee met via conference call to vote on a quota transfer request. The transfer was approved, again with the mandated forfeiture of 10% of the quota balance to be removed from the quota pool.

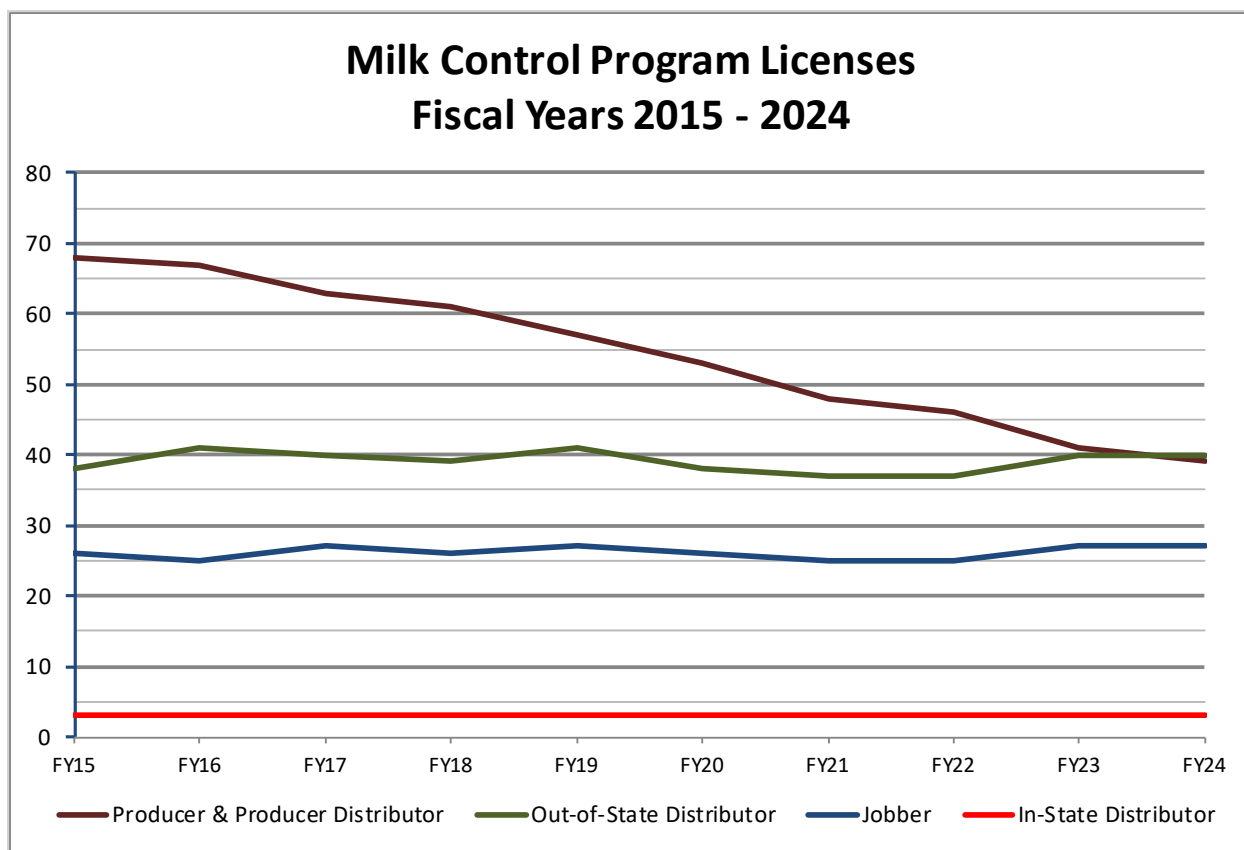
LICENSING SUMMARY

The program issues licenses to producers, producer-distributors, distributors, and jobbers (a class of distributors that purchase and resell milk). The following table shows the number of licenses issued in fiscal year 2024 for each type of business. Licenses are issued on an annual fiscal year basis (July 1 – June 30). By statute, the license fee is two dollars per license, and the fees are deposited into the state general fund.

Licenses Issued for Fiscal Year 2024

License Type	Number of Licenses
Producer	36
Producer-Distributor	3
In-State Distributor	3
Out-of-State Distributor	40
Jobber	27

The following chart shows the number of licenses issued for each license type for Fiscal Year 2015 through Fiscal Year 2024, combining the number of producers and producer-distributors. The chart reflects consolidation affecting the milk industry.



ADMINISTRATIVE ASSESSMENTS AND COLLECTION

Administrative assessments are levied on sales of milk by Montana producers, producer-distributors, in-state distributors, and out-of-state distributors to secure funds to administer and enforce the act. The assessments are classified as special revenue and are the sole source of funding for the board and program.

As required by statute, the board considered the fiscal year 2025 assessment rates (at its January 24, 2024, meeting) and voted to leave the assessment rates for Fiscal Year 2025 at the Fiscal Year 2024 rates. At the time of the meeting, the program projected that the program's cash balance would decrease by approximately \$31,622 during the fiscal year 2025, which would give them sufficient funds to be able to administer the act.

Assessment Rates by License Type for Fiscal Year 2024 & Fiscal Year 2025

License Type	FY2024 Assessment Rates	FY2025 Assessment Rates
Producer	\$0.02150/cwt	\$0.02150/cwt
Distributor	\$0.02150/cwt	\$0.02150/cwt
Producer-Distributor	\$0.04300/cwt	\$0.04300/cwt

ESTIMATE OF MONTANA DAIRY CONSUMPTION

ESTIMATE METHOD & LIMITATIONS

The estimated dairy consumption in Montana is based on combining information from assessments reports submitted by pool handlers, producer-distributors, and out-of-state distributors. The forms submitted by distributors gather different levels of information depending on the type of distributor. Information from pool handlers and producer-distributors focuses on the weight of milk utilized. Information gathered from import reports from in-state and out-of-state distributors focuses on product volume or weight to which milk equivalent factors are applied to determine milk equivalent weight subject to administrative assessments. Because different sources of information are being combined, the information should be viewed as an estimate. Additionally, because the milk equivalent factors used by the program changed in Fiscal Year 2019 relative to prior years, the estimate of Montana’s dairy consumption by milk equivalent weight is not comparable to years prior to Fiscal Year 2019 for several products.

Pool handlers (Meadow Gold and Darigold) report how milk received is utilized in monthly reports submitted for pooling calculations. Pool handlers sell some bulk milk to other dairy manufacturers located in Montana. The utilization of this milk is attributed to the class of utilization thought to account for these manufacturers’ utilization.

Producer-distributors report total milk produced and sold in reports submitted with payment of administrative assessments and report how the milk was utilized. In estimating dairy product consumption, product weights are estimated through calculations that use product density and milk equivalent factors.

Plant distributors also report imports of dairy products.

The following tables show estimates of dairy consumption in Montana in terms of product consumed (gallons or pounds of product) and in terms of milk equivalent (weight of milk utilized to manufacture the products consumed, determined on a total milk solids basis). The milk equivalent weight of imported dairy products is calculated by multiplying the units of product imported by the milk equivalent factors shown in the table labeled “Dairy Product Milk Equivalent Factors Used by the Milk Control Program.”

FISCAL YEAR 2024: MONTANA ESTIMATED DAIRY CONSUMPTION (BY PRODUCT VOLUME OR WEIGHT)

Class / Type / Product	Products from Montana Plants	% of Product Total from Montana	Products from Out-of-State Plants	% of Product Total from Out-of-State	Total Consumption Estimate
CLASS I (gallons) White & Flavored Milk, Buttermilk, Eggnog	9,722,567	41.10%	13,932,149	58.90%	23,654,715
CLASS II					
Fluid/Whip (gallons)					
Half and Half	48,231	4.37%	1,055,872	95.63%	1,104,103
Whipping Cream	101,969	8.46%	1,102,739	91.54%	1,204,708
Creamers			922,642	100.00%	922,642
Aerosol Whip			129,953	100.00%	129,953
Uncultured (gallons)					
Ice Cream / Mix / Ice Milk / Novelties	645,154	13.04%	4,301,482	86.96%	4,946,636
Frozen Yogurt / Mix			369,361	100.00%	369,361
Cultured (pounds)					
Cottage Cheese	128,532	3.28%	3,7911,561	96.72%	3,920,561
Sour Cream & Dressings	12,818	0.23%	5,443,089	99.77%	5,455,907
Yogurt / Kefir	512,802	2.93%	16,964,837	97.07%	17,477,639
CLASS III (pounds)					
Cream Cheese			1,974,894	100.00%	1,974,894
Cheese	77,358	0.25%	30,327,325	99.75%	30,404,683
Butter	5,110	0.5%	9,987,527	99.95%	19,987,527

DAIRY PRODUCT MILK EQUIVALENT FACTORS USED BY THE MILK CONTROL PROGRAM

Product	Milk Equivalent (lbs. per 1 lb. of product)	Milk Equivalent (lbs. per 1 gallon of product)
White Milk		6.07 – 7.94
Flavored Milk		6.18 – 8.13
Buttermilk		6.87
Eggnog		9.82
Half and Half (10.5% - 18% milkfat)		12.53
Creamers		12.53
Light Cream (18% - 30% milkfat)		17.60
Light Whipping Cream (30 – 36% milkfat)		25.50
Heavy Whipping Cream (>36% milkfat)		29.41
Aerosol Whip		17.44
Ice Cream		7.23
Ice Milk / Sherbet		0.96
Frozen Yogurt		5.40
Frozen Dairy Novelties		6.05
Ice Cream Mix		14.75
Shake Mix / Yogurt Mix		11.80
Cottage Cheese	1.61	
Cottage Cheese (low fat or no fat)	1.41	
Dry Curd Cottage Cheese	1.61	
Sour Cream (and similar dips and dressings)	1.91	
Non-fat Sour Cream	0.51	
Yogurt / Kefir	0.92	
Butter	6.51	
Cream Cheese	3.61	
Hard Cheese	4.90	

Raw milk is composed of approximately 87.55% water and 12.45% milk solids by weight (3.68% butterfat + 8.77% milk solids not fat). Milk solids not fat includes protein, lactose, and minerals. The amount of butterfat and milk solids not fat used to manufacture different products varies. Low-fat dairy products have less milk solids content than comparable full-fat dairy products. Butter has a high amount of milk solids per pound of product because 81% of its weight is milk solids, nearly all of which is butterfat.

FISCAL YEAR 2024: MONTANA ESTIMATED DAIRY CONSUMPTION – BY MILK EQUIVALENT WEIGHT

Class / Type / Product	Products from Montana Plants <i>(lbs. milk equivalent)</i>	Products from Out-of-State Plants <i>(lbs. milk equivalent)</i>	Total Consumption Estimate <i>(lbs. milk equivalent)</i>
CLASS I			
White & Flavored Milk, Buttermilk, Eggnog	91,213,857	106,536,896	197,750,753
TOTAL CLASS I	91,213,857	106,536,896	197,750,753
CLASS II			
Fluid/Whip			
Half and Half	587,675	13,230,077	13,817,752
Whipping Cream	1,102,466	28,526,159	29,628,625
Creamers		11,560,710	11,560,710
Aerosol Whip		<u>2,266,377</u>	<u>2,266,377</u>
Subtotal	1,690,141	55,583,321	57,273,462
Uncultured			
Ice Cream / Mix / Ice Milk / Novelties	7,131,452	37,717,506	44,848,958
Frozen Yogurt / Mix		3,614,053	3,614,053
Candy Products	<u>165,600</u>		<u>165,000</u>
Subtotal	7,131,452	41,331,560	48,463,012
Cultured			
Cottage Cheese	181,230	5,917,814	6,099,044
Sour Cream & Dressings	18,070	10,123,374	10,141,448
Yogurt / Kefir	<u>471,778</u>	<u>15,607,650</u>	<u>16,079,428</u>
Subtotal	671,082	31,648,838	32,319,920
TOTAL CLASS II	9,492,675	128,563,719	138,056,394
CLASS III			
Cream Cheese		7,129,367	7,129,367
Cheese	765,841	148,603,895	149,369,736
Butter	<u>10,220</u>	<u>64,985,534</u>	<u>64,995,754</u>
TOTAL CLASS III	776,061	220,718,796	221,494,857

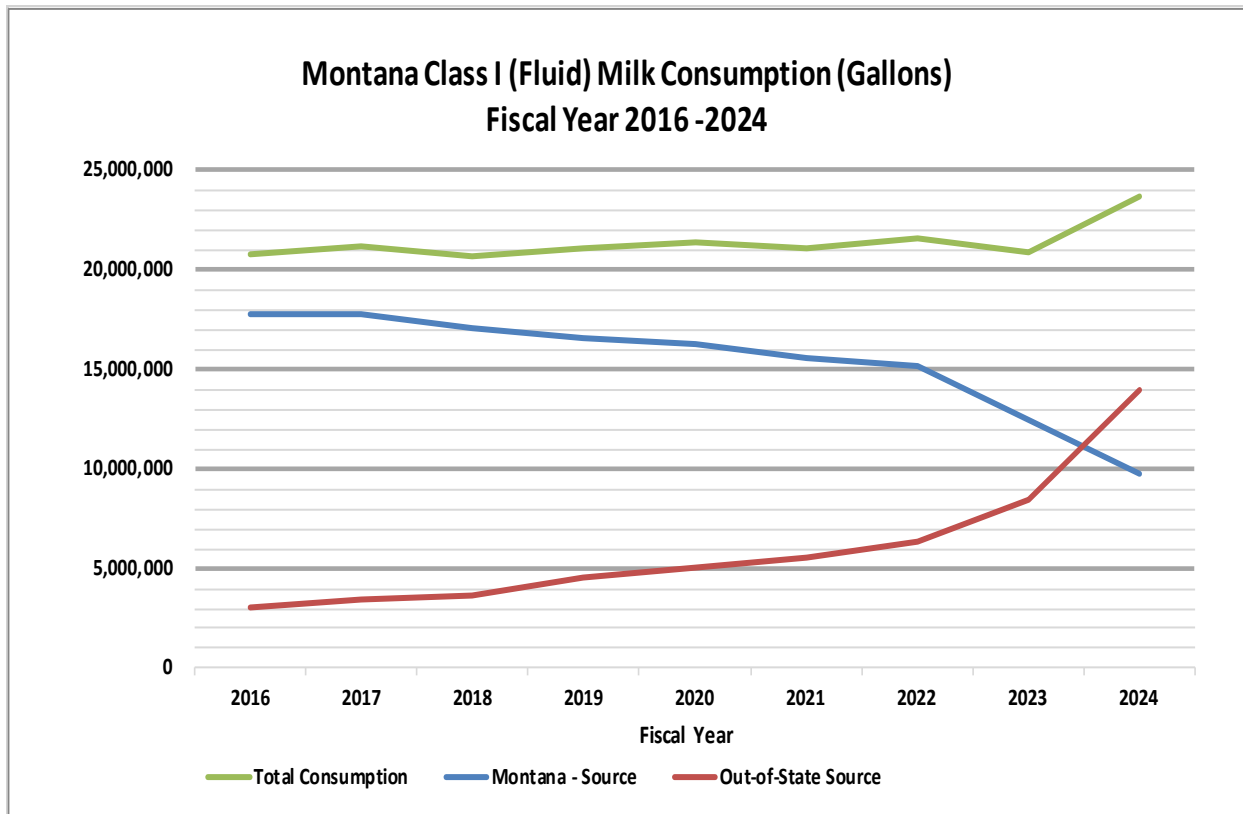
SUMMARY

Most of the milk produced in Montana is utilized as fluid milk consumed in Montana. In Fiscal Year 2024, an estimated 23.7 million gallons of fluid milk were consumed in Montana compared to 20.87 million gallons in Fiscal Year 2023. Of the 23.7 million gallons, 41.10% was from Montana bottling plants using milk supplied by Montana dairy farmers. Fiscal Year 2024 saw a decrease in Montana consumption of 18.49% from Fiscal Year 2023. The next largest use of Montana-origin milk in Fiscal Year 2024 was for ice cream type products (ice cream, ice milk, and frozen yogurt). An estimated 4.9 million gallons of ice cream type products were consumed in Montana, 13.04% of which was manufactured by Montana plants. Approximately 4.47% of Class II fluid cream products (half and half, cream, creamers, and aerosol whip) that were consumed in Montana were from Montana plants. Montana plants account for only a small percentages of all other dairy products consumed by Montanans. Production of these products outside of Montana is largely a function of industry dynamics that relate to scales of efficiency in manufacturing and placement of manufacturing facilities near areas with greater population or areas with larger supplies of milk.

Based on the dairy consumption estimates from Fiscal Year 2016 to Fiscal Year 2024 the following describes some observed trends.

- **Class I Fluid Products** - The estimated consumption of Class I fluid milk products in Montana since fiscal year 2016 is relatively flat (0.22% average annual increase). Fiscal Year 2024 saw a 1.47% increase in the consumption of Class I milk products while Fiscal Year 2023 saw a decrease of 3.15%. Nationally, between Calendar Years 2016 and 2023, annual total fluid milk consumption experienced an annual decline in all but two years, with a low of -4.96% in 2021. This was an average decline of 2.10% in this time period. Montana's population growth rate of approximately 0.87% (90,767 people) from Calendar Year 2016 to Calendar Year 2023 has not help reverse the decline of the per capita fluid milk consumption that has occurred. The percentage of Class I milk consumed in Montana that originated in Montana plants in Fiscal Year 2024 was 45% less than Fiscal Year 2016; Fiscal Year 2024 was almost 22% less than in Fiscal Year 2023. The USDA Economic Research Service data report: "Fluid Beverage Milk Sales Quantities by Product (Annual)" shows that on the average, for the last decade, consumption of whole milk has trended higher, and consumption of skim milk has trended lower.
- **Fluid Cream Type Products** - Estimates indicate that consumption of fluid cream type products increased by 11.83% annually (on average) since Fiscal Year 2016.
- **Ice Cream Type Products** - Estimates indicate that consumption of ice cream type products increased by 3.06% in Fiscal Year 2024 following a 3.10% decrease in Fiscal Year 2023. This is followed by a 2.89% annual increase (on average) between Fiscal Years 2016 - 2023.
- **Yogurt** - Estimates indicate yogurt consumption increased by 8.43% in Fiscal Year 2024 following a 3.84% annual decrease (on average) in Fiscal Years 2019 - 2023 after a double digit increases in Fiscal Years 2016 and 2017.
- **Butter** -The estimated butter consumption decreased 2.93% in Fiscal Year 2024 following an increase of 2.41% in Fiscal Year 2023. This resulted in a 14.38% annual increase (on average) in Fiscal Years 2016 - 2024.

The U.S. Census Bureau estimates that Montana’s population in Calendar Year 2023 was 1.13 million. Montana experienced modest population growth of approximately 1.09% per year from Calendar Year 2016 to Calendar Year 2023. Tourism may impact some of Montana’s dairy consumption trends for products such as butter, fluid cream, and ice cream that food service establishments serve or use as ingredients. The University of Montana Institute for Tourism & Recreation Research estimated that there were 12.5 million nonresident visits in Calendar Year 2023. The average duration of a visit in Calendar Year 2023 was five nights according to the University of Montana Institute for Tourism & Recreation Research’s interactive report for Montana.



MINIMUM PRODUCER PRICES

CLASSIFIED PRICING

To aid in the orderly marketing of milk, many jurisdictions in the United States, starting in the 1930s, established price regulation systems that set prices for milk purchased from dairies based upon how the buyer (a processor) utilizes the milk. Currently in the United States, over 85% of all milk sold by dairy farms is subject to federal or state price regulation that uses classified pricing. Classified pricing systems have been adopted in a number of other western countries as well. Such systems help prevent situations in which producers are pitted against each other by processors to undercut prices, which can lead to a chaotic marketplace in which the supply and sanitary condition of milk becomes imperiled. Montana's milk classification system is similar to federal (USDA) milk classification. Class I utilization includes fluid milk products, including buttermilk and eggnog. Class II utilization includes fluid cream products, ice cream type products, cottage cheese, sour cream, and yogurt. Class III utilization includes cheese and cream cheese. Class IV utilization includes butter and dried milk. Montana law allows the Board of Milk Control to combine milk classes, and Montana Class III utilization combines the federal Class III and Class IV utilizations. In Montana, Class III utilization also includes bulk milk inventory, dumped milk, and up to 2% shrinkage, with any shrinkage in excess of 2% of pool receipts being allocated to Class I utilization. Shrinkage is a term that describes milk received that is not accounted for by utilization or inventory. Shrink is unavoidable and typically is caused by processing losses and incidental waste.

PRICE FORMULAS

The Milk Control Act requires that the Board of Milk Control establishes formulas to calculate minimum prices to be paid for milk based upon classified utilization.

Montana Class I

Montana's Class I milk price formula adds a \$2.55/cwt differential to the USDA Federal Order Base Class I price published in the USDA Agricultural Marketing Service's Announcement of Advanced Prices and Pricing Factors. The Montana Class I butterfat price is the Federal Order Advanced Butterfat Pricing Factor (from the same USDA price announcement) plus \$0.0255/lb. The USDA Federal Milk Marketing Administration announces these prices in advance of the month of production. The federal announcement is generally made on the Wednesday following the first two full weeks of the month. The following table illustrates the application of the Montana Class I price formulas for June 2024.

Montana Class I Price Computations per ARM 32.24.480(2) for June 2024	
Federal Order Base Class I Price for Milk Testing 3.5% Butterfat (\$/cwt)	\$20.08
Plus: Montana Differential (\$/cwt)	\$2.55
Montana Class I Milk Price for Milk Testing 3.5% Butterfat (\$/cwt)	\$22.63
Federal Order Advanced Butterfat Pricing Factor (\$/lb.)	\$3.4512
Plus: Montana Differential (\$/lb.)	\$0.0255
Montana Class I Butterfat Price (\$/lb.)	\$3.4767
Value of Montana Class I Butterfat at 3.5 lbs.	\$12.16845
Value of Montana Class I Skim Milk at 96.5 lbs.	\$10.46155
Montana Class I Milk Price for Milk Testing 3.5% Butterfat (\$/cwt)	\$22.63000

Montana Class II & Class III

The Montana Class II and Class III price formulas reference the prices listed below that are published in the USDA Agricultural Marketing Service’s Announcement of Advanced Prices and Pricing Factors.

- Class II Skim Milk Price (converted to dollars per pound of skim milk)
- Advanced Class III Skim Milk Pricing Factor (converted to dollars per pound of skim milk)
- Advanced Class IV Skim Milk Pricing Factor (converted to dollars per pound of skim milk)
- Advanced Butterfat Pricing Factor

These prices are determined by USDA using federally established formulas that rely upon USDA-calculated weighted average prices of butter, nonfat dry milk, cheese, and whey for the first full two weeks of the month prior to the month to which the price announcement applies. Prices and sales volumes of these products are mandatorily reported to USDA by the United States dairy industry.

The Montana Class III Butterfat Price formula subtracts the Montana Class III Butterfat Price Differential from the Advanced Butterfat Pricing Factor. The following tables illustrate the application of the Montana Class II and Class III price formulas for June 2024.

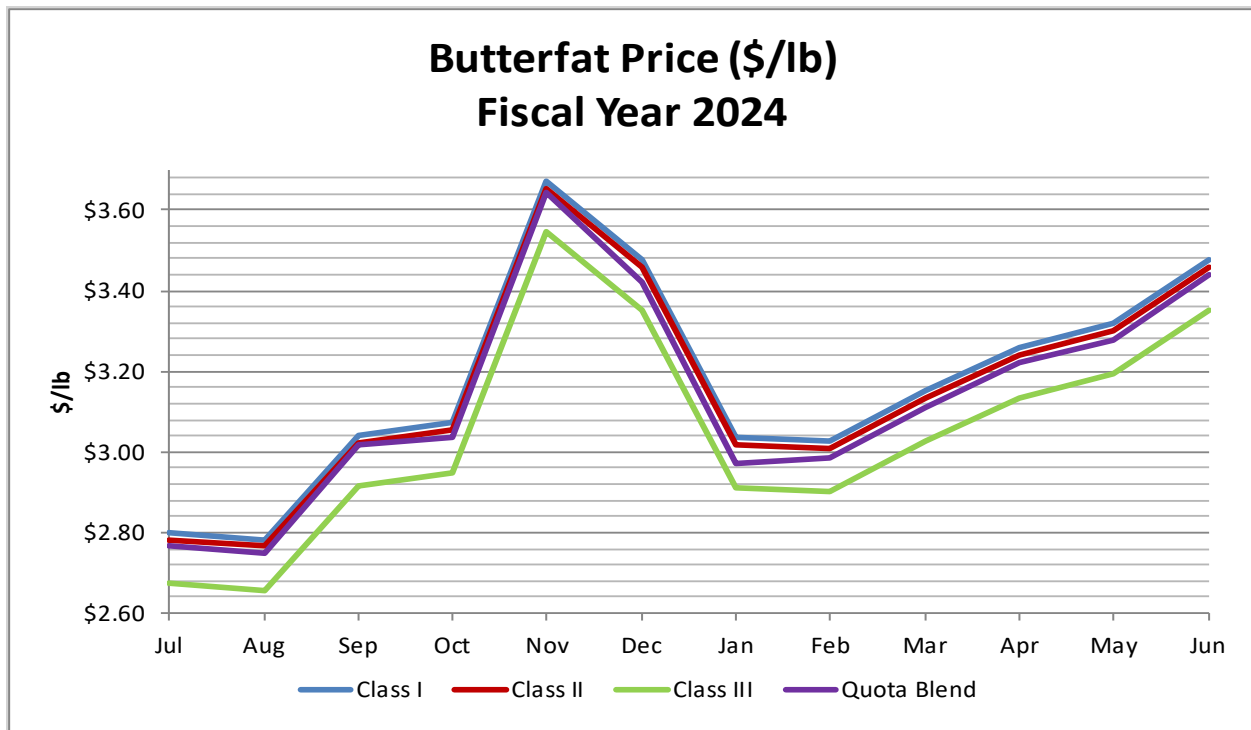
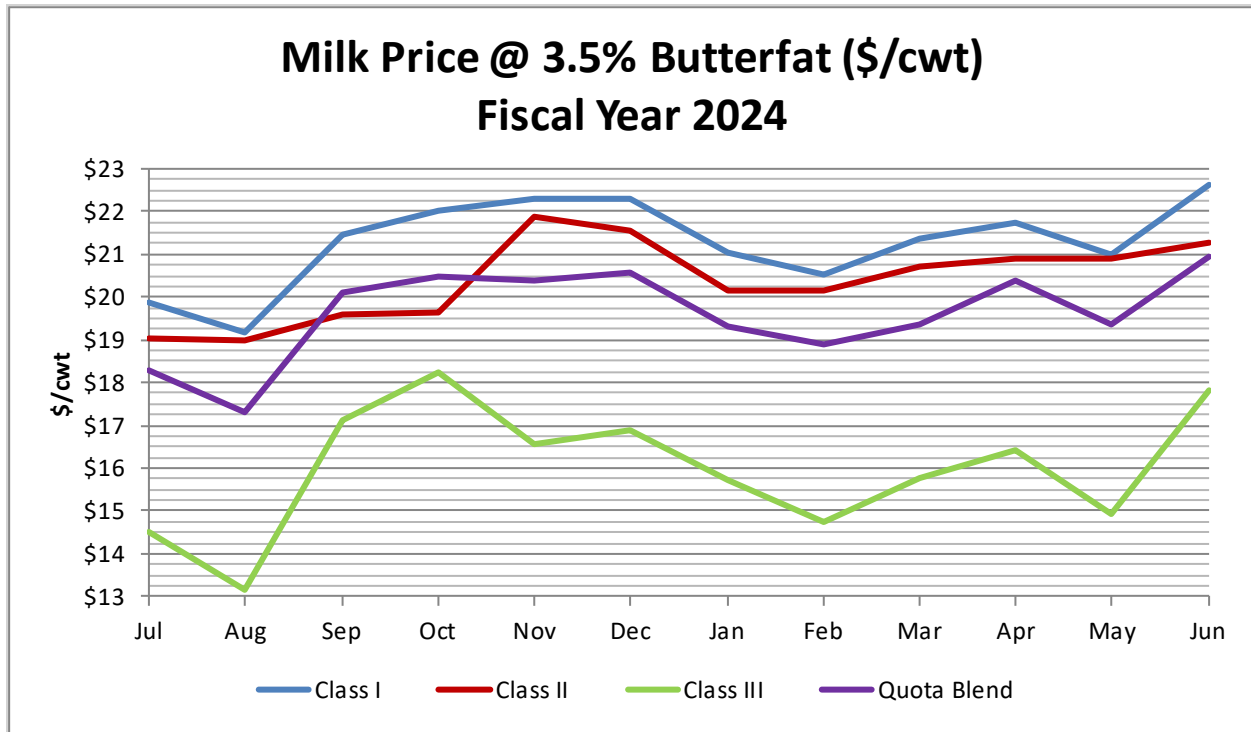
Montana Class II Price Computations per ARM 32.24.480(3) for June 2024	
Advanced Butterfat Pricing Factor (\$/lb.)	\$3.4512
Plus: \$0.007/lb. (\$/lb.)	\$0.0070
Montana Class II Butterfat Price (\$/lb.)	<u>\$3.4582</u>
Montana Class II Skim Milk Price (\$/lb.): federal Class II Skim Milk Price converted to units of dollars per pound of skim milk	<u>\$0.0950</u>
Value of Montana Class II Butterfat at 3.5 lbs.	\$12.10370
Value of Montana Class II Skim Milk at 96.5 lbs.	\$9.16750
Montana Class II Milk Price for Milk Testing 3.5% Butterfat (\$/cwt)	<u>\$21.27120</u>

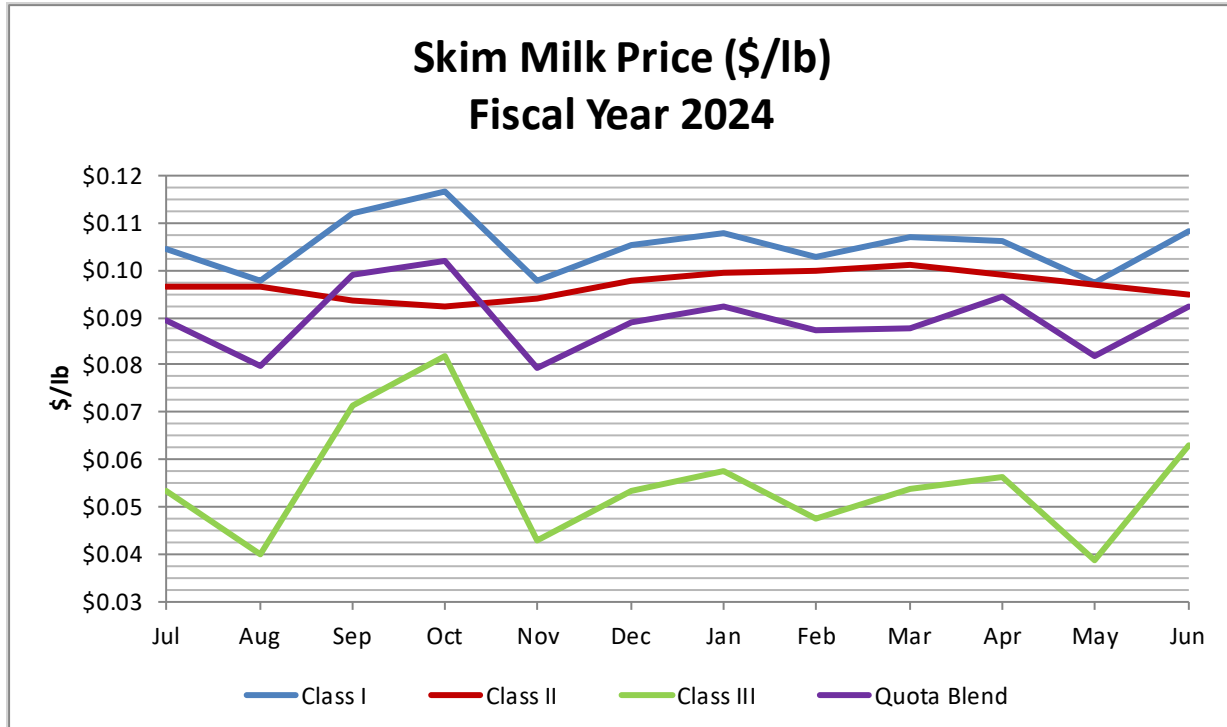
Montana Class III Price Computations per ARM 32.24.480(4) for June 2024	
Advanced Butterfat Pricing Factor (\$/lb.)	\$3.4512
Less: Montana Class III Butterfat Price Differential (\$/lb.)	(\$0.1000)
Montana Class III Butterfat Price (\$/lb.)	<u>\$3.3512</u>
Federal Class III Skim Milk Pricing Factor (\$/cwt)	\$6.29
Federal Class IV Skim Milk Pricing Factor (\$/cwt)	\$8.80
Montana Class III Skim Milk Price (\$/lb.): lower of Class III or Class IV Skim Milk Pricing Factor, converted to units of dollars per pound of skim milk	<u>\$0.0629</u>
Value of Montana Class III Butterfat at 3.5 lbs.	\$11.72920
Value of Montana Class III Skim Milk at 96.5 lbs.	\$6.06985
Montana Class III Milk Price for Milk Testing 3.5% Butterfat (\$/cwt)	<u>\$17.79905</u>

ANNOUNCED MINIMUM PRICES IN FISCAL YEAR 2024

Cows generally produce milk that has 3.5% - 4% butterfat content. The dairy industry often uses a reference price for milk having 3.5% butterfat content. One hundred pounds of milk (a hundredweight, abbreviated “cwt”) with 3.5% butterfat content consists of 3.5 pounds of butterfat and 96.5 pounds of skim milk. Skim milk consists of water (over 90% of skim milk weight) and solids that are not fat (lactose, protein, and minerals). In Montana, an individual producer is paid on the actual butterfat and skim milk produced by the dairy’s herd for each month of production.

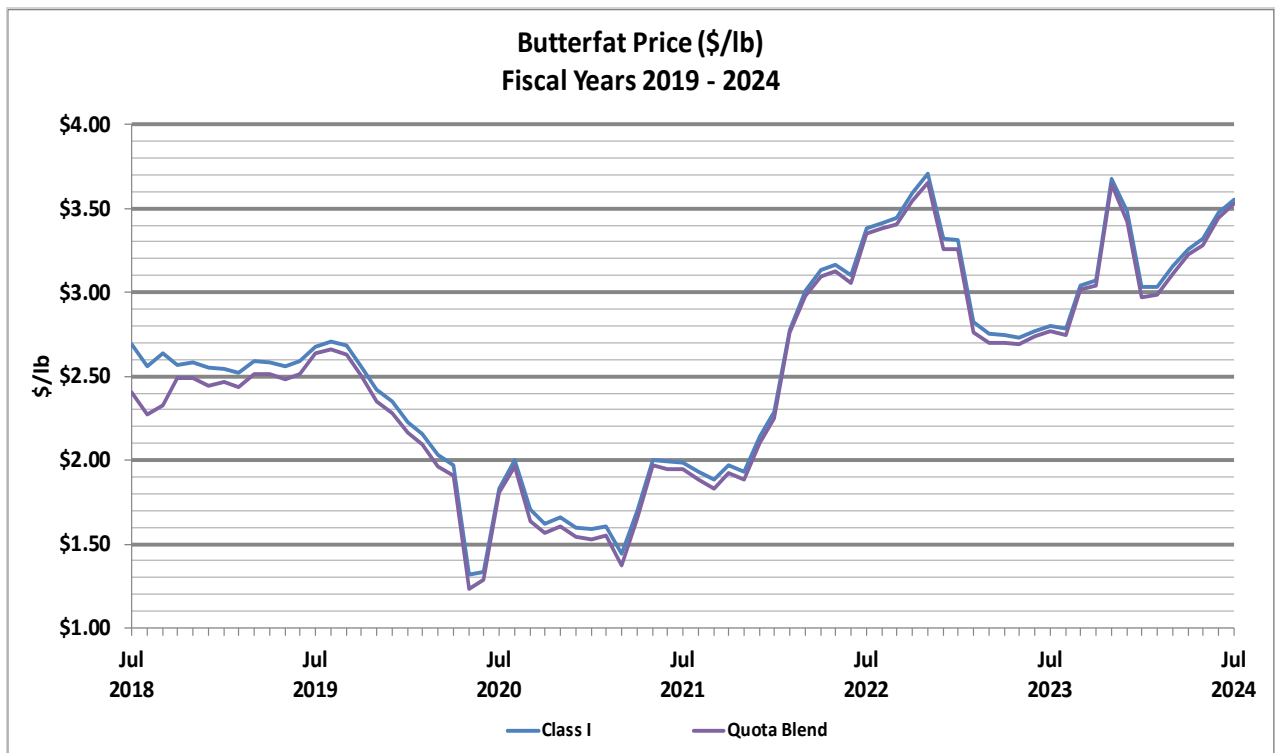
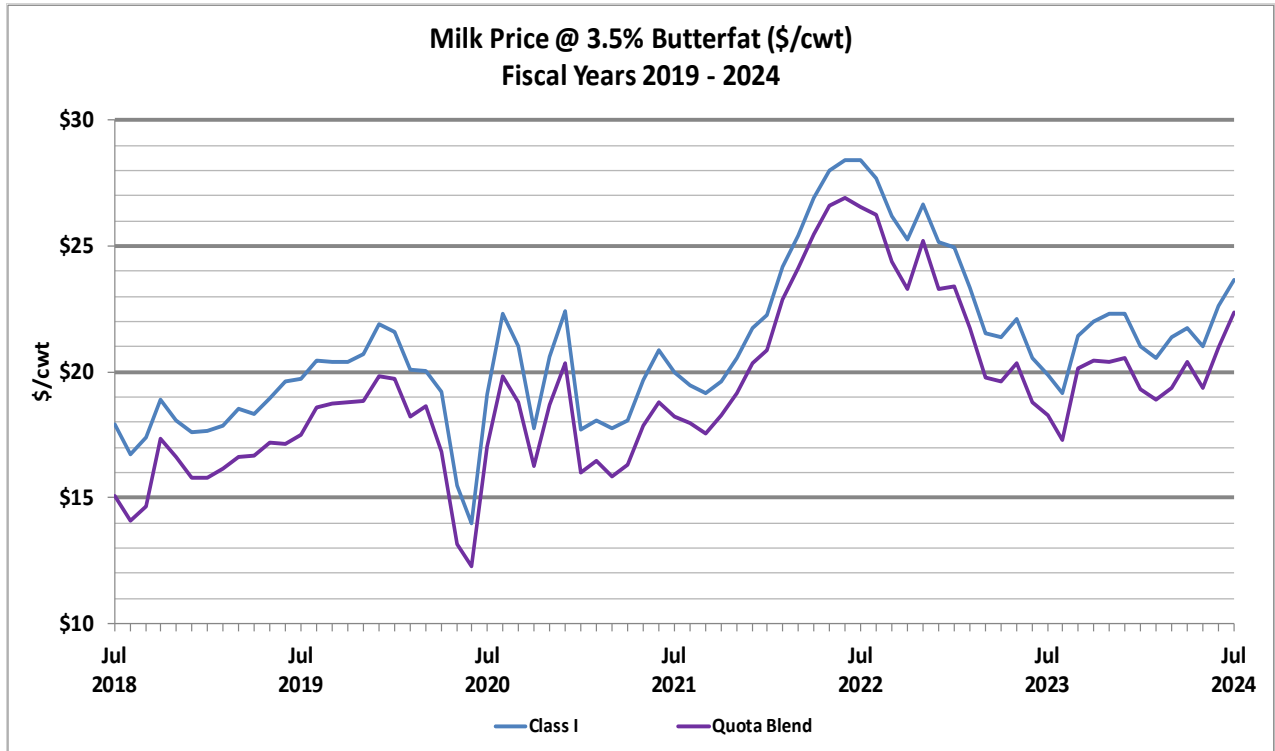
The charts below show announced minimum prices for months in Fiscal Year 2024 (July 2023 – June 2024) along with the calculated quota price based on actual milk utilization.

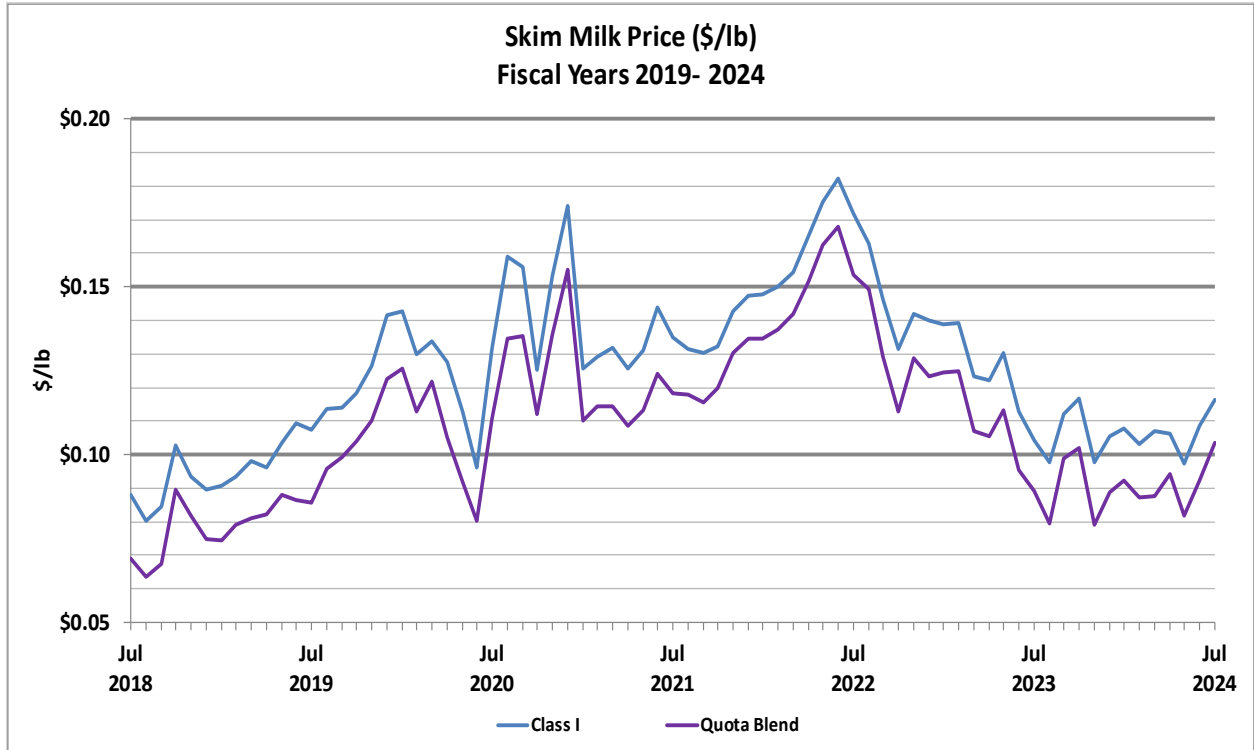




PRICE CHARTS JULY 2019 – JULY 2024

The following charts show Montana Class I prices and Montana Quota Blend producer prices for milk containing 3.5% butterfat, butterfat component of milk, and skim milk component of milk.



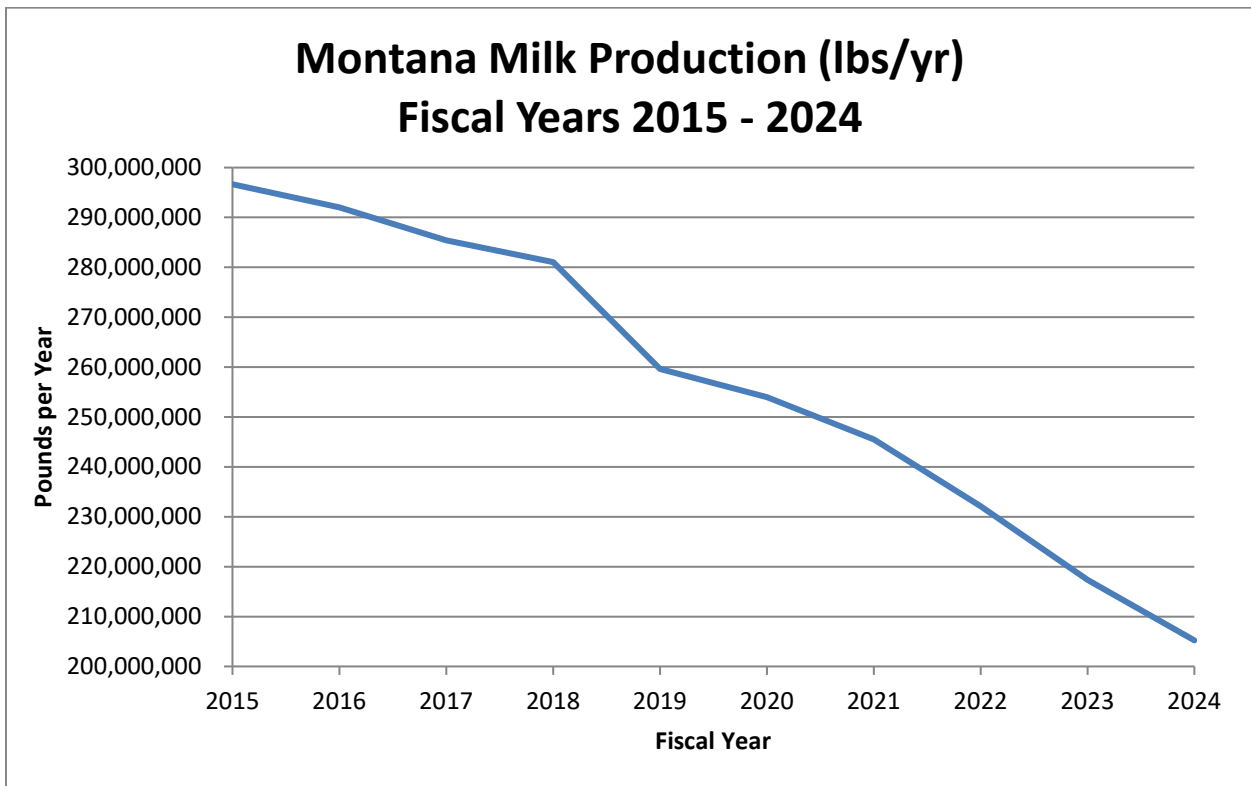
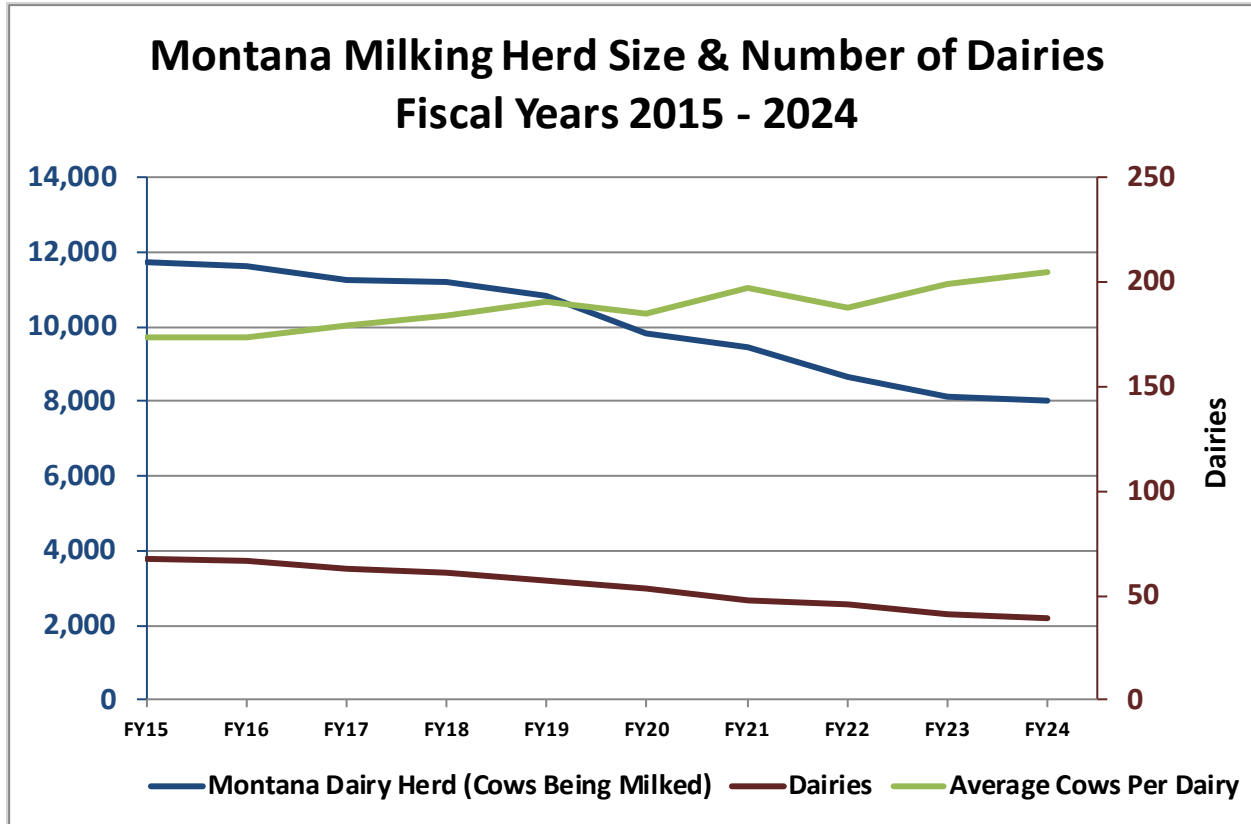


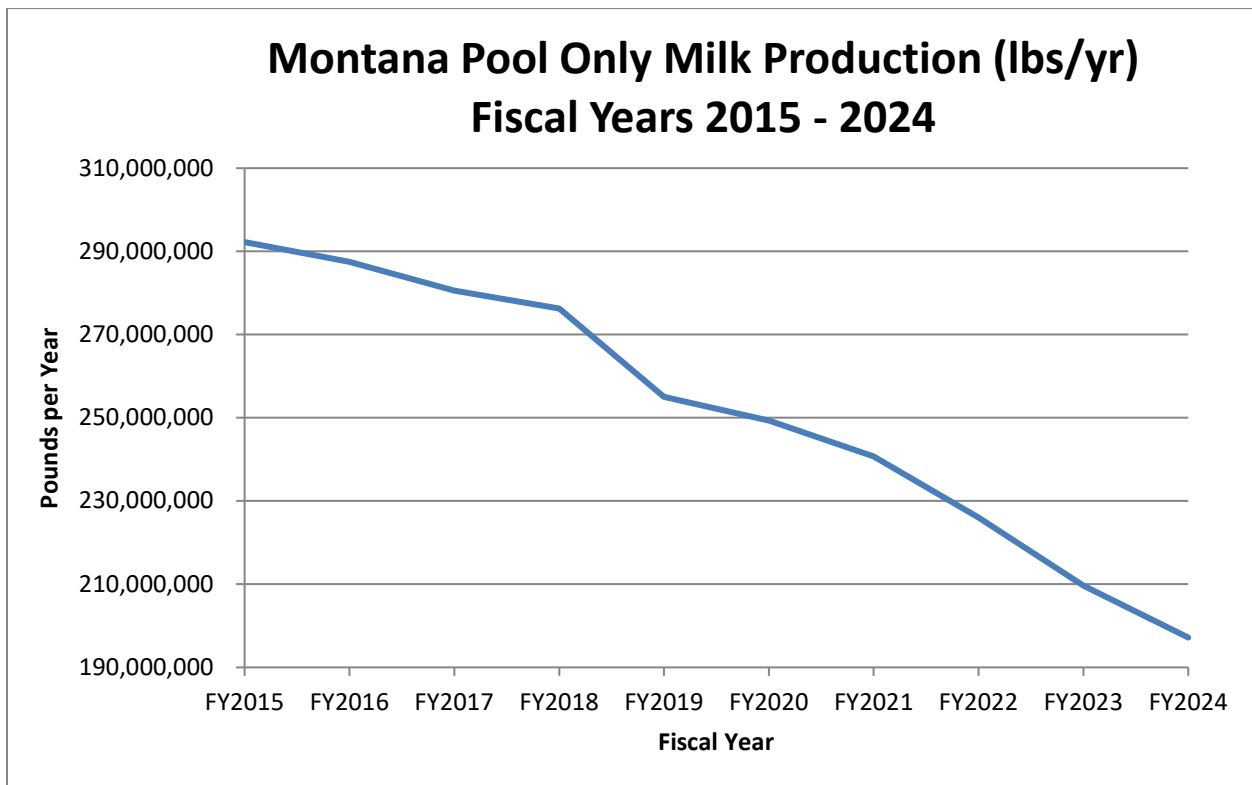
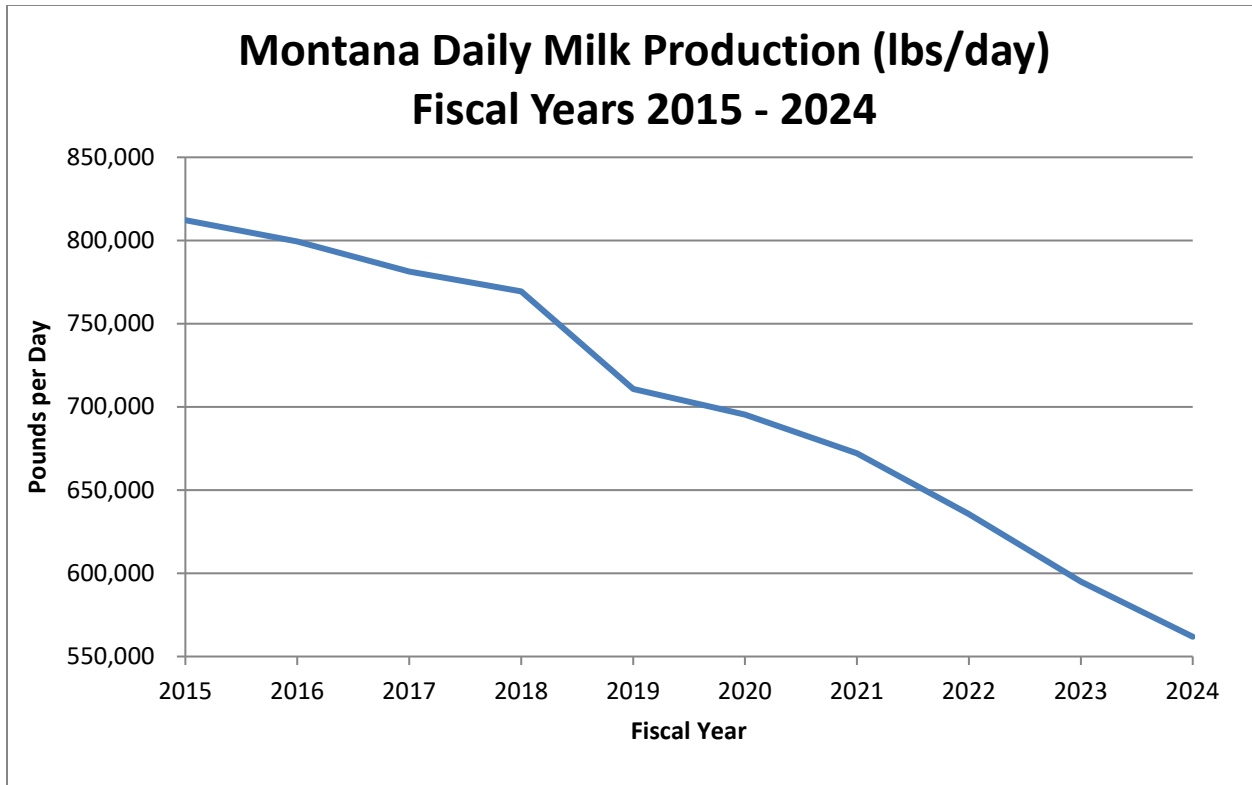
MONTANA MILK PRODUCTION

Dairies that participate in Montana’s pool marketing system account for most of Montana’s milk production. These dairies supply milk to Darigold’s processing plant in Bozeman and Meadow Gold’s processing plants in Great Falls and Billings. Dairies that are licensed as producer-distributors account for the rest of Montana milk production. The map on page 23 shows the counties in which dairies were licensed to operate in the Fiscal Year 2024.

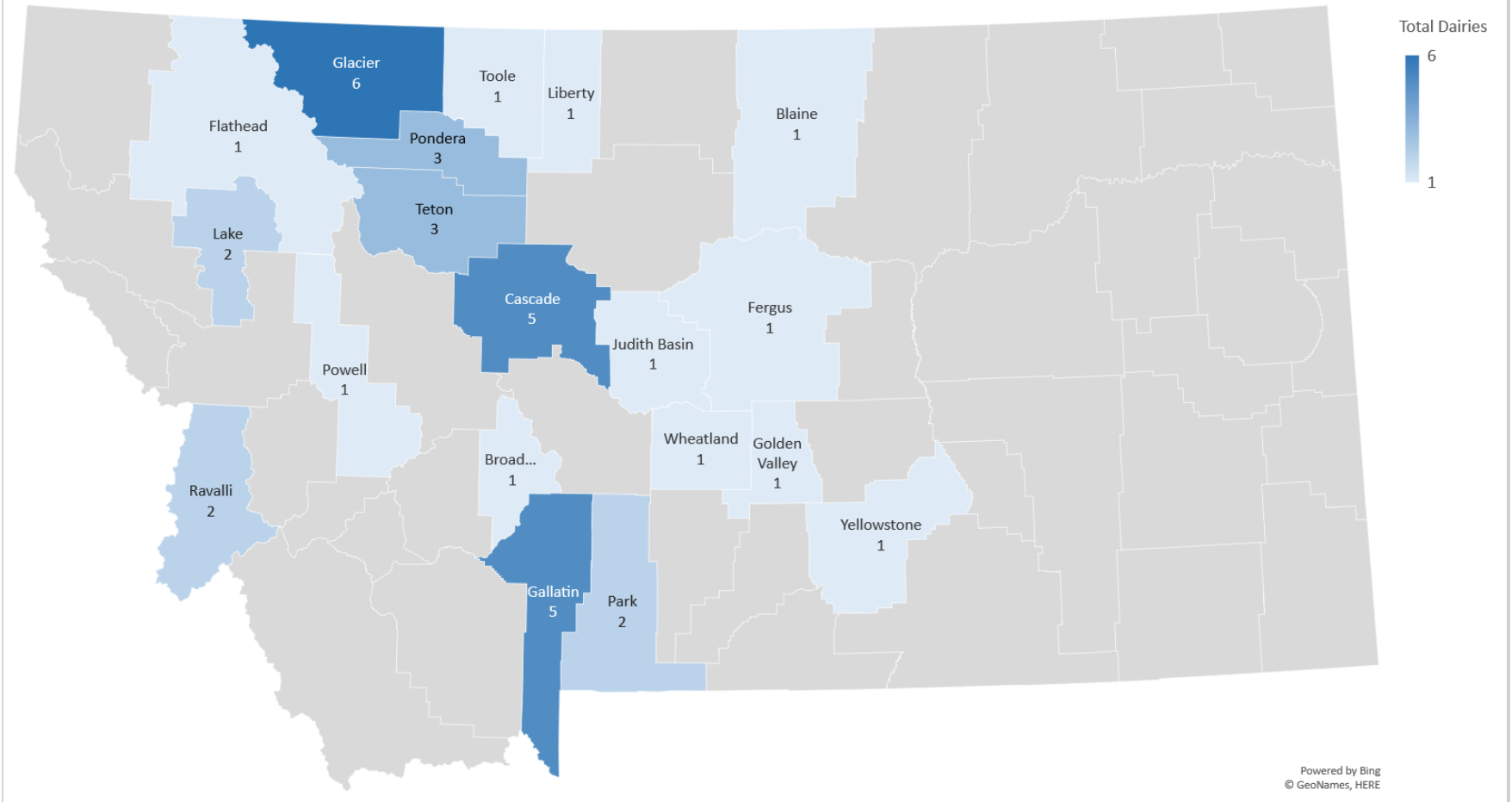
In Fiscal Year 2024 the Montana pooling dairies produced approximately 201 million pounds of milk, down almost 14 million pounds from Fiscal Year 2023. Milk production declined each year between Fiscal Year 2015 to Fiscal Year 2024 at a rate of 4.08% per year for a total decline of 31.41% of production by the end of Fiscal Year 2024, with most of the decrease occurring in Fiscal Year 2024. Fiscal Year 2015 started with the high about 293 million pounds and ended with the low in Fiscal Year 2024 of about 201 million pounds. This can be attributed to the decline of licensed dairies from 65 to 36 and the decline of the number of milked cows from 11,137 to 7,586 in this time period.

The following charts show the size of Montana’s pooling dairy herds and the number of dairies licensed in Fiscal Year 2015 through Fiscal Year 2024, Montana milk production from Fiscal Year 2015 through Fiscal Year 2024, and total milk production (per year and per day) for Fiscal Year 2015 through Fiscal Year 2024. The size of Montana’s milking herd is based on information provided by producers and producer-distributors in annual license applications. From Fiscal Year 2015 to Fiscal Year 2024, the number of cows being milked declined by 31.87%, while the number of dairies declined by 42.65%. The average number of cows being milked per dairy increased from 173 cows per dairy in Fiscal Year 2015 to 205 cows per dairy in Fiscal Year 2024. The increase in milked cows per dairy did not increase the overall production to offset the loss of the dairies in this time period. Montana milk production in Fiscal Year 2024 was the lowest in the 10-year period and was 36.75% lower than the average percent of the Fiscal Year 2015 – 2024 time period.





Montana Dairies per County Licensed for Fiscal Year 2024



MILK IMPORTS / EXPORTS

In the discussion of Montana’s milk imports and exports, the terms refer to trade between Montana and other states, not international trade.

MILK IMPORTS

Bulk Milk

A provision in the Milk Control Act (81-23-302(10), MCA) specifies that distributors with processing facilities in the state shall *“whenever possible, purchase milk from Montana producers for the processing of products to be sold in this state if milk is available from Montana producers at the price set by the board.”* In Fiscal Year 2024, pool handlers imported 69.09 million pounds of bulk unpasteurized milk, an average of approximately 5.76 million pounds per month. In comparison, Montana producers delivered almost 197.17 million pounds of milk to pool handlers in Fiscal Year 2024, an average of approximately 16.43 million pounds per month. Due to milk plant needs and the decline in supply from Montana producers, Montana distributors’ imports of bulk milk increased by 22.42 million pounds in Fiscal Year 2024.

The bulk milk imports are partially attributed to Meadow Gold – Billings purchasing milk from Wyoming producers, processing the milk, and distributing it to the Wyoming market. Infrequently, pool handlers import bulk milk for other reasons, such as enabling a plant to be shut down during a holiday. Current levels of Wyoming bulk milk imports are usually higher than Class I packaged milk exports for any given month. As such, Montana has become a net importer of milk from Wyoming.

Processed Dairy Products

Processed dairy products are imported by both out-of-state distributors and in-state distributors. The following table shows the dairy product imports in Fiscal Year 2024 in units of pounds of milk equivalent calculated on a milk solids basis.

Estimated Montana Dairy Product Imports – Fiscal Year 2024

Product Description	Imports (lbs. milk equivalent)
Class I Fluid Milk Products	84,686,329
Class II Fluid Cream Products	55,583,321
Class II Uncultured Products (<i>ice cream & frozen yogurt</i>)	41,331,560
Class II Cultured Products (<i>cottage cheese, sour cream, yogurt</i>)	31,648,838
Class III Products (<i>cream cheese, cheese, butter</i>)	220,718,796

MILK EXPORTS

Montana exports include Class I fluid milk products packaged in Montana’s pool plants, bulk unpasteurized milk, and bulk cream collected by pool handlers. Montana’s exports of bulk milk and Class I packaged fluid milk products significantly exceed its bulk milk imports. In Fiscal Year 2024 Montana exported approximately 119.7 million pounds of milk consisting of approximately 111.0 million pounds of Class I packaged fluid milk products and approximately 71,400 pounds of bulk raw milk. This is an increase in Class I packaged fluid milk products of 8.4 million pounds and a decrease in bulk raw milk of 2.1 million pounds from the previous fiscal year. The program estimates that approximately 8.6 million pounds of bulk cream exported from Montana could have produced approximately 4.3 million pounds of butter. In Fiscal Year 2024, approximately 10.0 million pounds of butter were consumed in Montana, almost all of it imported from outside of Montana.

Montana Milk Exports – Fiscal Year 2024

Product Description	Exports (lbs.)
Bulk Cream	8,601,484
Bulk Milk	71,400
Class I Packaged Fluid Milk Products	111,024,435
Total	119,697,319

MONTANA POOL MARKETING SYSTEM

EXPLANATION OF POOLING & QUOTA SYSTEM

Montana Pool System

Montana's pool marketing system enables producers to receive uniform milk prices (for milk of equivalent butterfat content) based on the overall utilization of pool milk received by all of Montana's pool handlers. Without the pool marketing system, an individual dairy's milk price would be completely dependent upon how the receiving plant utilized the milk. By having a pool marketing system, variation in blend prices (for milk of identical butterfat content) for producers delivering to different plants does not occur. Because of the statewide pooling arrangement, producers supplying an individual plant are not as exposed to the volatility of that plant's marketing "wins" and "losses."

Quota System

Montana's quota system was established in an effort to discourage overproduction that would depress statewide pool blend prices. Montana's quota system establishes a \$1.50/cwt differential in the price of milk produced "in quota" over the price of milk produced "in excess" of quota. Excess production accounted for 0.69% of production in Fiscal Year 2024, a 0.33% increase from Fiscal Year 2023 excess production.

Montana's quota system allows for additional quota to be allocated and requires transferred quota to be reduced. An adjustment (increase) in quota happens when both of the following conditions occur: (1) more than 83.5% of non-surplus quota milk is utilized in Class I and Class II and (2) non-surplus quota milk utilized for Montana Class I and Class II products increases relative to two years prior. In Calendar Year 2023, 54.12% of non-surplus quota milk was utilized in Class I and Class II, and non-surplus quota milk utilized for Montana Class I and Class II products decreased by 27.97 million pounds compared to Calendar Year 2021. Because of a generally steady decline in Montana Class I and Class II utilization and steady levels of production, the last time there was an adjustment (increase) in quota was in Calendar Year 2001.

The provisions of Montana's administrative rules allow for quota to be provided to a "new eligible producer" for a portion of production. For a new eligible producer, the following sales to a pool handler are treated as if the milk was quota milk: 20% of sales to a pool handler in April – August and 35% of sales in September – March. If the new eligible producer purchases quota, the described assignment of quota is reduced by the amount of quota purchased. Producers are allowed to transfer quota. Per ARM 32.24.502(3), producers forfeit all quota if delivery of milk to pool handlers is discontinued for over 90 consecutive days. If such producer's quota is not transferred within the 90-day period, it is forfeited.

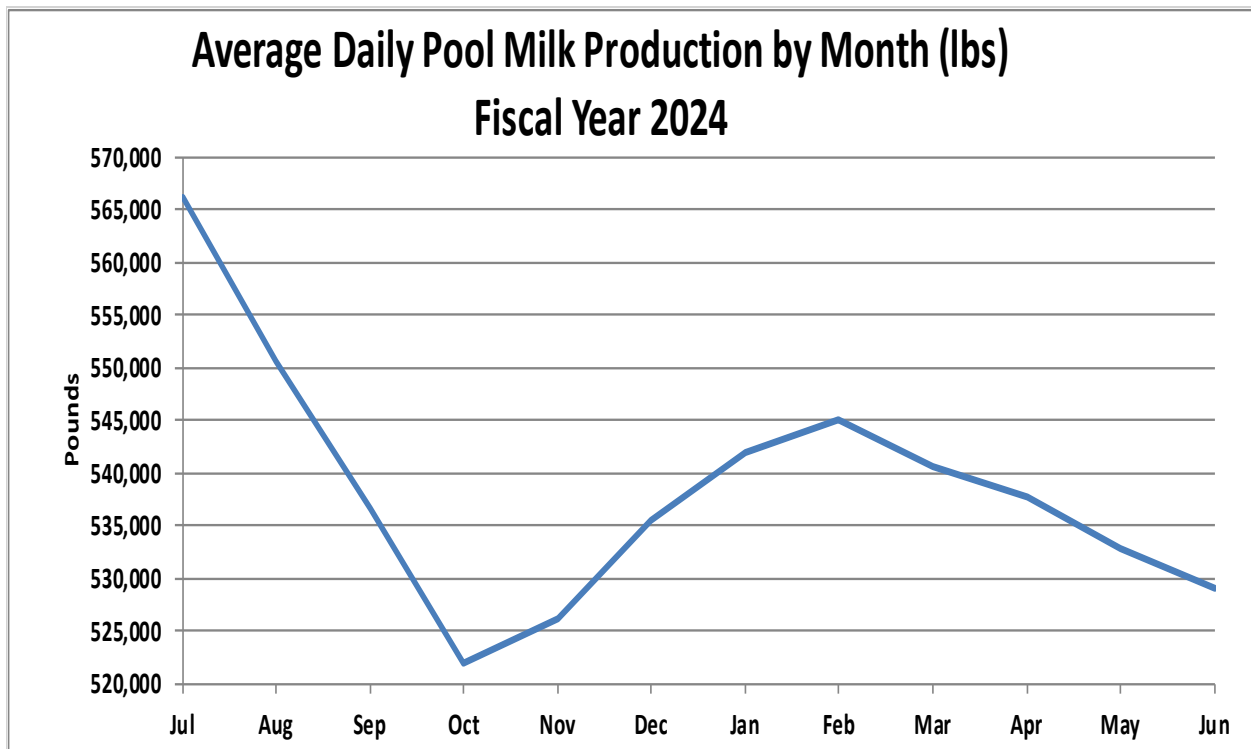
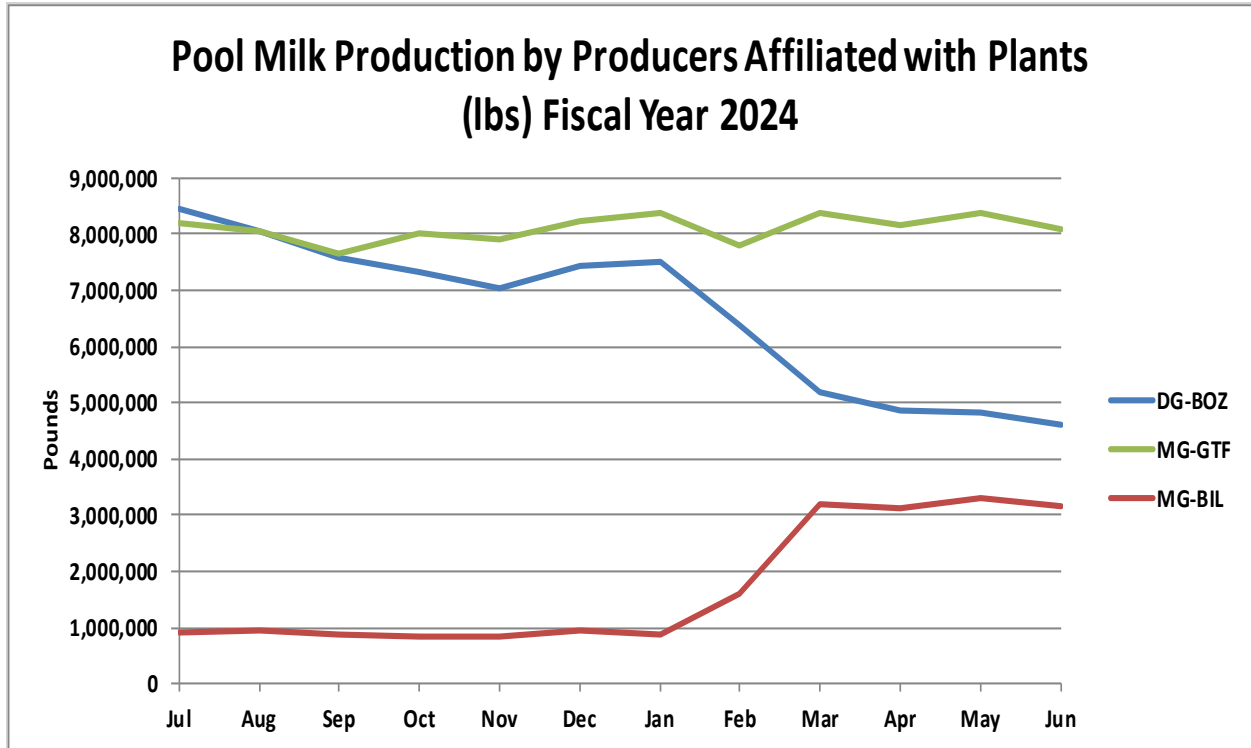
POOL PRODUCTION

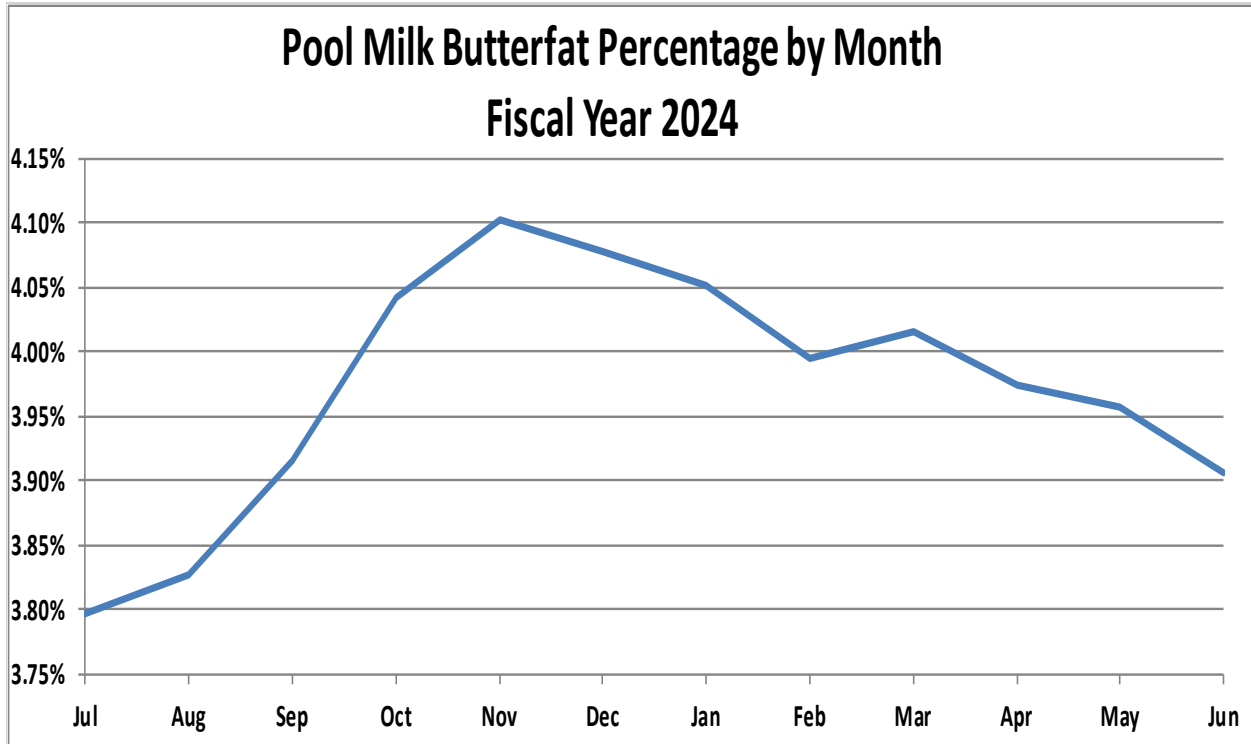
In Fiscal Year 2024, 36 pool dairies produced and delivered milk to three pool handlers. The following table shows that in Fiscal Year 2024 the Montana milk pool's annual production decreased by 12,457,817 pounds, the average butterfat content increased by 0.09%, the average pool price decreased by \$2.84, and the annual gross receipts decreased by \$41,453,191 from Fiscal Year 2023. In terms of percentages, production decreased by 5.94%; the average price decreased by 11.87%; and annual gross receipts decreased by 17.11%. While Fiscal Year 2024 saw a slight overall increase in butterfat percent from the previous fiscal year, it was not enough to alter the effect of the significantly lower average pool price which resulted from the decrease in production pounds and announced price.

Summarized Pool Information: Fiscal Year 2015 – 2024

Fiscal Year	Production (lbs.)	Average Butterfat (%)	Average Pool Price (\$/cwt)	Annual Gross Receipts (\$)
2015	292,232,179	3.73%	\$19.93	\$58,232,010
2016	287,449,454	3.72%	\$15.39	\$44,251,077
2017	280,582,982	3.74%	\$16.36	\$45,912,344
2018	276,252,329	3.78%	\$16.05	\$44,351,192
2019	255,057,344	3.81%	\$16.78	\$42,802,717
2020	249,308,894	3.83%	\$18.27	\$45,545,253
2021	240,694,786	3.84%	\$18.18	\$43,769,676
2022	225,997,202	3.80%	\$22.12	\$49,999,913
2023	209,631,261	3.88%	\$23.86	\$50,016,655
2024	197,173,442	3.97%	\$21.02	\$41,453,191

The following charts provide information from Fiscal Year 2024 about pool production on a monthly basis to show seasonal aspects of production. The amount (weight) of monthly production is impacted by the number of days of the month, the number of cows being milked, dairy cow productivity, and herd management. The first chart shows milk received from pool producers by each of Montana's pool handlers. Dairy cows experience what is referred to as the "spring flush" and produce more milk in the spring and early summer months. In February 2024 a Darigold – Bozeman producer transferred to Meadow Gold – Billings. This gives an apparent lack of a "spring flush" for Darigold – Bozeman when in reality it is the loss of the producers milk pounds. The second chart determines the average daily pounds of production per month by combining and averaging all pool producers monthly pounds. The third chart shows the monthly butterfat percentage as a whole of these same producers.

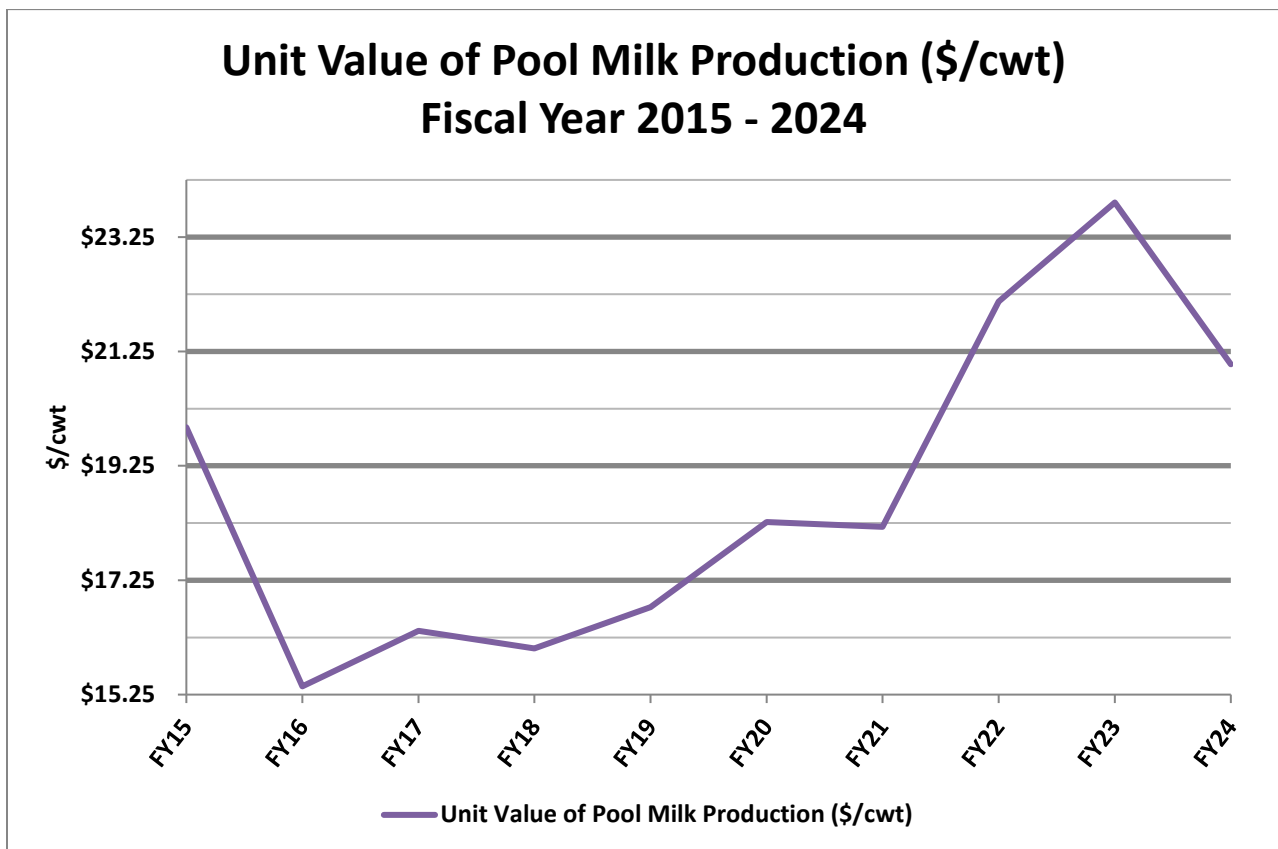
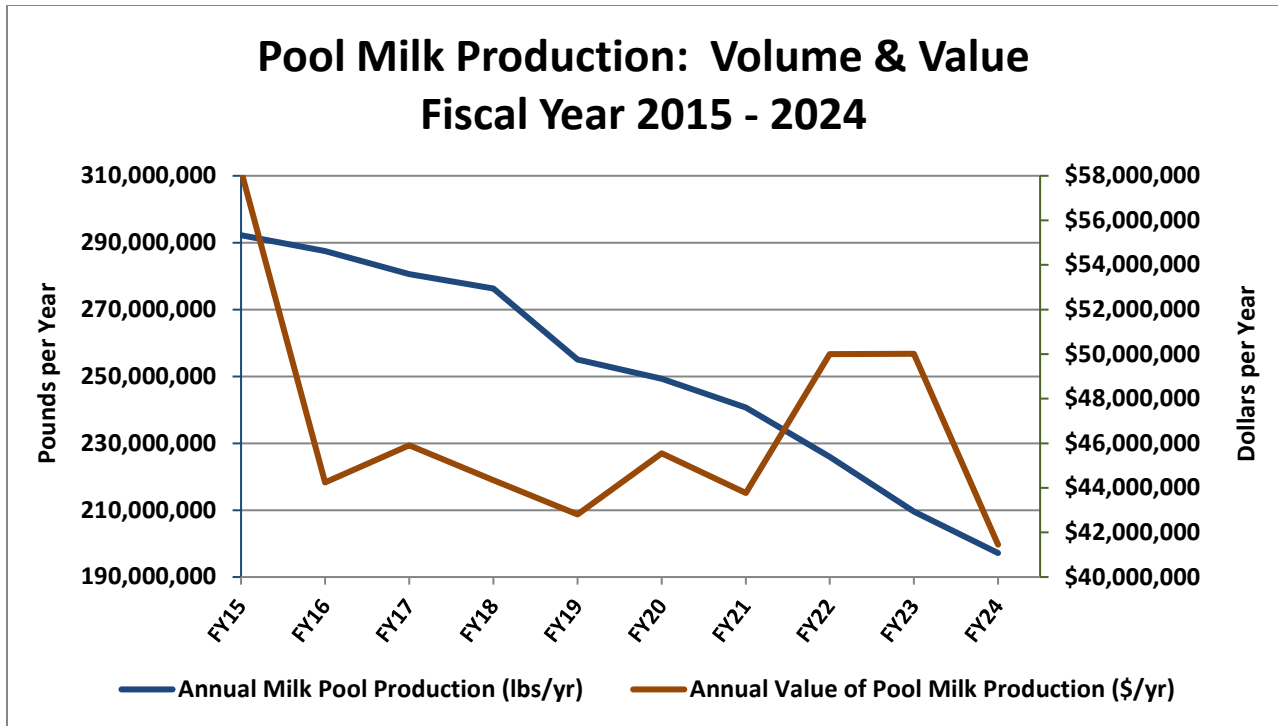




THE PRICE/COST OF POOL MILK

Montana’s pool marketing system establishes how pool dairies are compensated for milk. The program announces minimum prices prior to the month of production. Pool handlers report milk receipts and utilization information by the 8th day following the month of production; after which, the program uses the information to calculate quota and excess prices and calculate minimum amounts to be paid to pool producers.

The following charts provide perspective on the volume of pool production, annual value of pool milk sold to pool handlers, and annual average unit price paid for pool production from Fiscal Year 2015 through Fiscal Year 2024. Fiscal Year 2024 continued the downward trend in pooling production from the last decade. Over the long term, the unit value of production has generally trended upward and reflected milk prices. Prices in Fiscal Year 2024 took a dive downward following the highest price of the decade in Fiscal Year 2023.



The following table identifies the key factors that determine the value of Montana pool milk. The production and utilization factors result in a pool wide utilization value calculated for butterfat and skim milk produced by pool dairies. Adjustments are made to the skim milk utilization value for the transportation charges incurred for shipments of unprocessed pool milk between pool plants and for surplus milk sales.

Key Factors That Determine the Value of Montana Pool Milk
<p><i>Production & Utilization Factors</i></p> <ul style="list-style-type: none"> • pool wide production and butterfat content • announced minimum prices for skim milk and butterfat for each class • percentage of skim milk and butterfat utilized in each class
<p><i>Transportation Charges for Intrapool Shipments of Unprocessed Milk</i></p> <ul style="list-style-type: none"> • the volume of sales of unprocessed pool milk between pool plants and shipment freight rates
<p><i>Surplus Sale Factors</i></p> <ul style="list-style-type: none"> • volume of milk exported as Class I packaged surplus milk and location of the receiving market (whether the market is contiguous or non-contiguous to Montana) • volume of milk exported as bulk surplus milk, the sale proceeds received relative to the Montana classified value of the milk, and the freight costs of shipping the milk to out-of-state processors

Transportation charges incurred for shipments of unprocessed pool milk between pool plants are deducted from the pool skim milk utilization value.

“Surplus” milk is defined by ARM 32.24.150(43). In brief, surplus milk is milk produced in Montana that is not consumed in Montana, excluding sales of cream to out-of-state markets, inventory, shrink, and dumped milk. Surplus sale factors allow for adjustments to the value of pool milk that reflect market dynamics. Surplus milk may be milk sold to out-of-state markets in packaged form or in bulk. The majority of surplus milk is Class I packaged milk sold to out-of-state markets.

- For Class I packaged milk that is surplus milk, pool handlers pay the Montana Class I value minus the surplus sales adjustments established in rule that depend on whether the market is in a state that is contiguous or non-contiguous to Montana.
- For bulk surplus milk, the class of utilization is based on how the out-of-state receiving plant utilizes the milk. Most often, bulk surplus milk is classified as a Class III utilization because the receiving plants are cheese plants or powdered milk plants. The surplus adjustment for bulk surplus milk is the actual value received from the sales (market value), less an adjustment for freight charges requested by a pool handler, less the initial Montana utilization value (value based on Montana classified prices). Typically, bulk surplus sales adjustments are negative adjustments to the utilization value, but it is

possible to have a positive bulk surplus sales adjustment depending on the market value of milk and requested adjustment for freight charges.

Dairy Payroll: Quota / Excess Prices

The price an individual dairy is paid for the milk it sells in a month is based on whether the milk produced is within that dairy’s quota right and the extent to which production exceeds quota. Quota milk production is priced \$1.50/cwt higher than excess production. For each dairy, payment is based on the actual butterfat content of the dairy’s monthly milk production.

The following table provides a schematic of the sequence for determining prices to be paid to individual dairies for milk produced in quota and milk produced in excess of quota. The quota price shown for milk in the Montana minimum price charts is for milk with 3.5% butterfat content. The quota price is determined by calculating the statewide pool’s value of skim milk and butterfat (utilization of skim milk and butterfat multiplied by minimum prices for the associated class of milk); making adjustments to the pool skim milk value for transportation charges for shipments of unprocessed pool milk between pool plants and surplus sales adjustments; making adjustments to the pool skim milk value that maintain a stable balance in the producers’ settlement fund; and applying calculations that create a \$1.50/cwt differential between the quota milk price and excess milk price.

Skim Milk Portion of Milk	Butterfat Portion of Milk
Classification by Utilization for Skim Milk & Butterfat: I, II, III	
Pool wide Skim Milk Utilization Value <i>(Classified announced prices multiplied by weight of Class I, II, III utilization)</i>	Pool wide Butterfat Utilization Value <i>(classified announced prices multiplied by weight of Class I, II, III utilization)</i>
Adjustments to Skim Milk Utilization Value: - Transportation Charges for Intrapool Shipments + / - Surplus Sales Adjustments <u>+ / - Settlement Fund Adjustments</u>	
= Adjusted Pool wide Skim Milk Utilization Value	
Adjustments to create Quota / Excess Price Differential (\$1.50/cwt)	
Skim Milk & Butterfat Quota / Excess Unit Prices (\$/lb.)	
Blend Price to be Paid to an Individual Dairy Based Upon Actual Butterfat Content	

Utilization of Pool Milk Receipts

Pool handlers submit reports to the program that are used to determine the utilization of pool milk received. These reports show the weight of milk and butterfat used to produce products in the various classes of milk utilization. Ending inventory of Class I packaged milk is reported as a Class I utilization; and ending inventory of bulk milk is reported as a Class III utilization. Milk dumped is classified as a Class III utilization. Shrinkage, which is the difference between milk receipts and milk otherwise accounted for, is classified as a Class III utilization, except any

shrinkage in excess of two percent of producer receipts is classified as a Class I utilization. The purpose of classifying shrinkage exceeding the two percent threshold as a Class I utilization is to encourage pool handlers to be efficient in processing milk and to protect producers from bearing a cost for inefficient milk processing. The classification of unprocessed milk sold to other pool handlers is based on the receiving pool handler’s utilization of the milk.

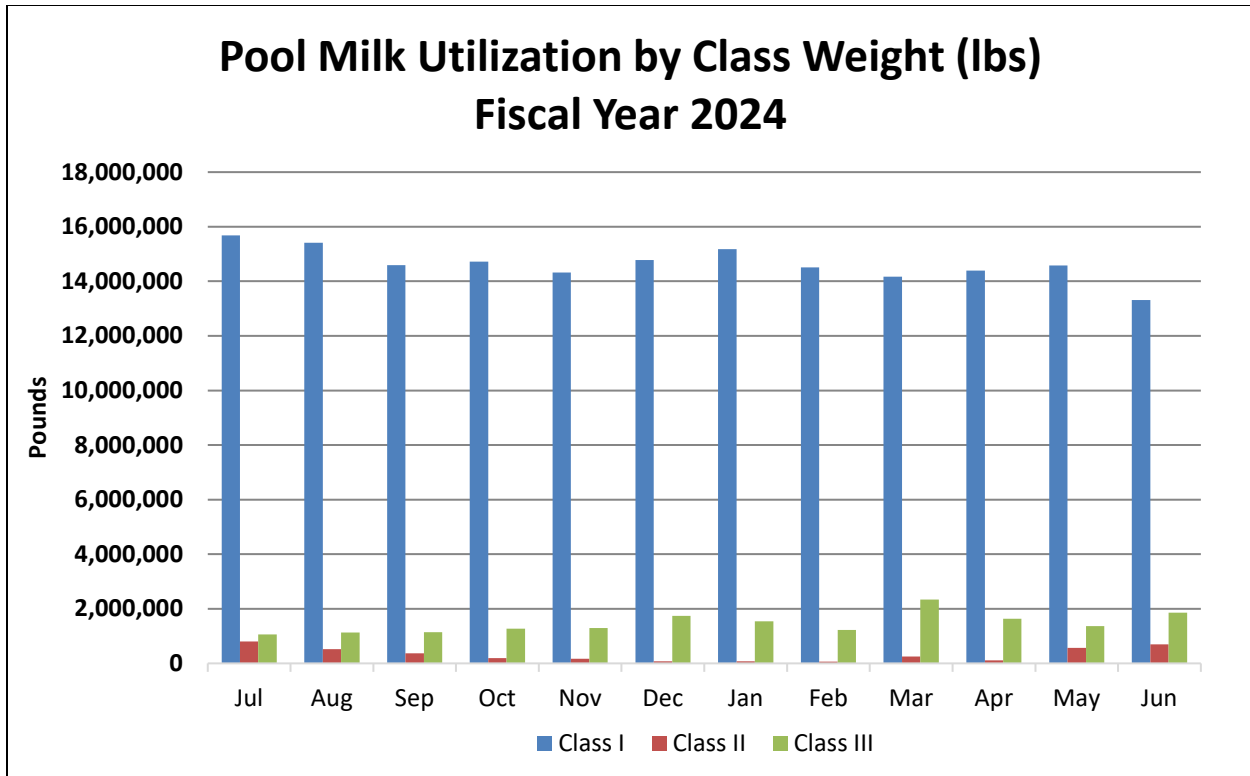
Two major elements of utilization factors are: 1) the minimum prices for each class of milk and 2) the percentage of butterfat and skim milk (the portion of milk that is not butterfat) utilized in each class of milk. Minimum prices are highest for pool milk utilized as Class I milk consumed in Montana, which accounted for 57.4% of pool production in Fiscal Year 2024, decreasing by slightly by 1.0% from the 58.4% in Fiscal Year 2023. The percentage of pool milk utilized as Class I milk consumed in Montana was 51.4% of pool production in Fiscal Year 2015 and has fluctuated slightly each fiscal year up to the current fiscal year, averaging 55.0% per fiscal year. This shows that as production pounds have decreased a majority of pounds are still being utilized for Class I production at close to the same rate for each fiscal year.

The following table summarizes the Fiscal Year 2024 utilization of skim milk and butterfat by class, value of utilization, and weighted average unit value.

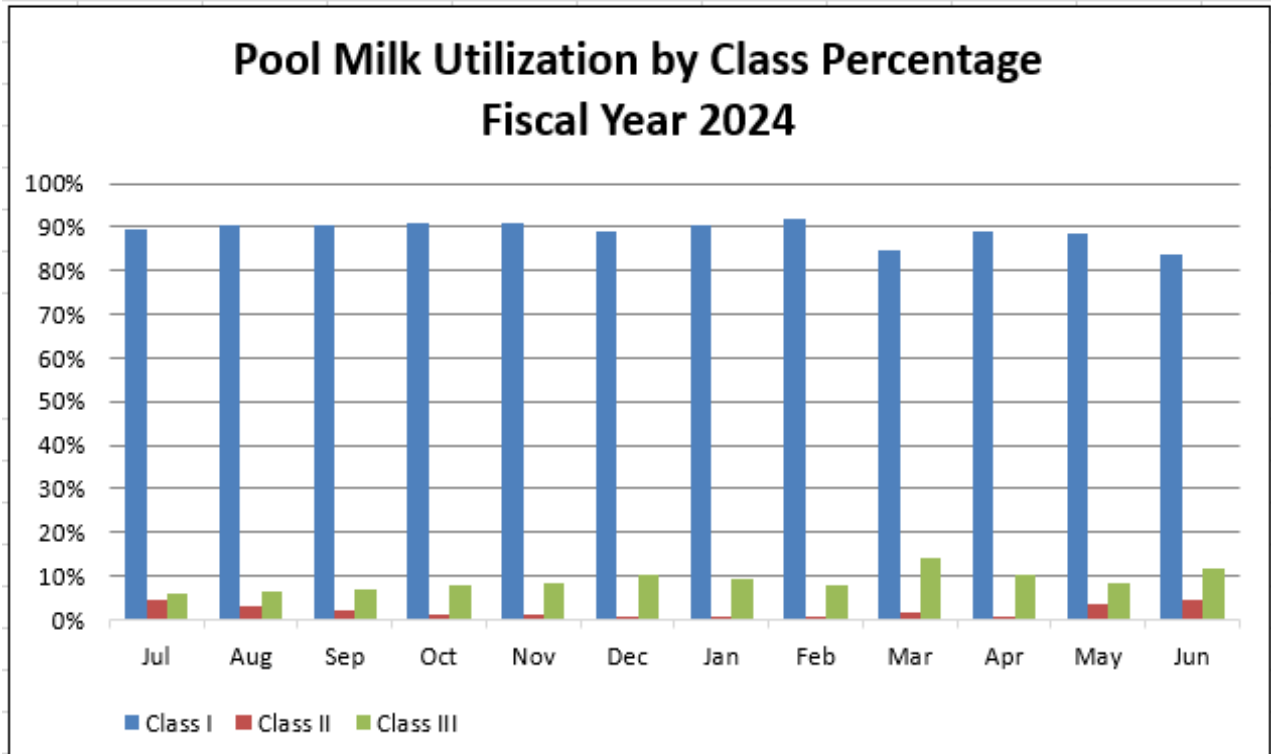
Fiscal Year 2024 Pool Milk Utilization Volume, Value, Average Unit Value Before Adjustments

	CLASS I	CLASS II	CLASS III	All Classes – Before Adjustments
Skim Milk Utilization (lbs.)	171,383,764	2,813,155	15,147,894	189,344,813
Skim Milk Utilization (\$)	\$18,134,690	\$453,896	\$837,168	\$19,425,755
Skim Milk Utilization – Unit Value (\$/lb.)	\$0.1058134	\$0.1613477	\$0.0552663	\$0.1025946
Butterfat Utilization (lbs.)	4,273,505	1,097,497	2,457,497	7,828,629
Butterfat Utilization (\$)	\$13,546,036	\$3,441,074	\$7,557,756	\$24,544,866
Butterfat Utilization – Unit Value (\$/lb.)	\$3.1697720	\$3.1353836	\$3.0752248	\$3.1532700

The following charts and tables show monthly pool wide utilization of milk in terms of pounds per month and percentage of production per month. Viewing utilization by percentage of production eliminates variation that is based on the number of days in a month. In terms of utilization as a percentage of production, Class I utilization remained close to 90% throughout the fiscal year with a high of 91.8% in February 2024 and a dip to 83.9% in June 2024. In the past, there has been a marked seasonal trend that was influenced by seasonal sales patterns and seasonality in milk production. Fiscal Year 2024 didn’t have the marked seasonal change of the past. This is most likely influenced by the increase in Class I packaged milk that was exported out of Montana throughout the fiscal year, and the lower dairy production pounds affecting the utilization rate. Class II utilization usually peaks in the summer months, driven by sales of ice cream and ice cream mix products. In Fiscal Year 2024 this was the case with peaks in production percentage from May to July.

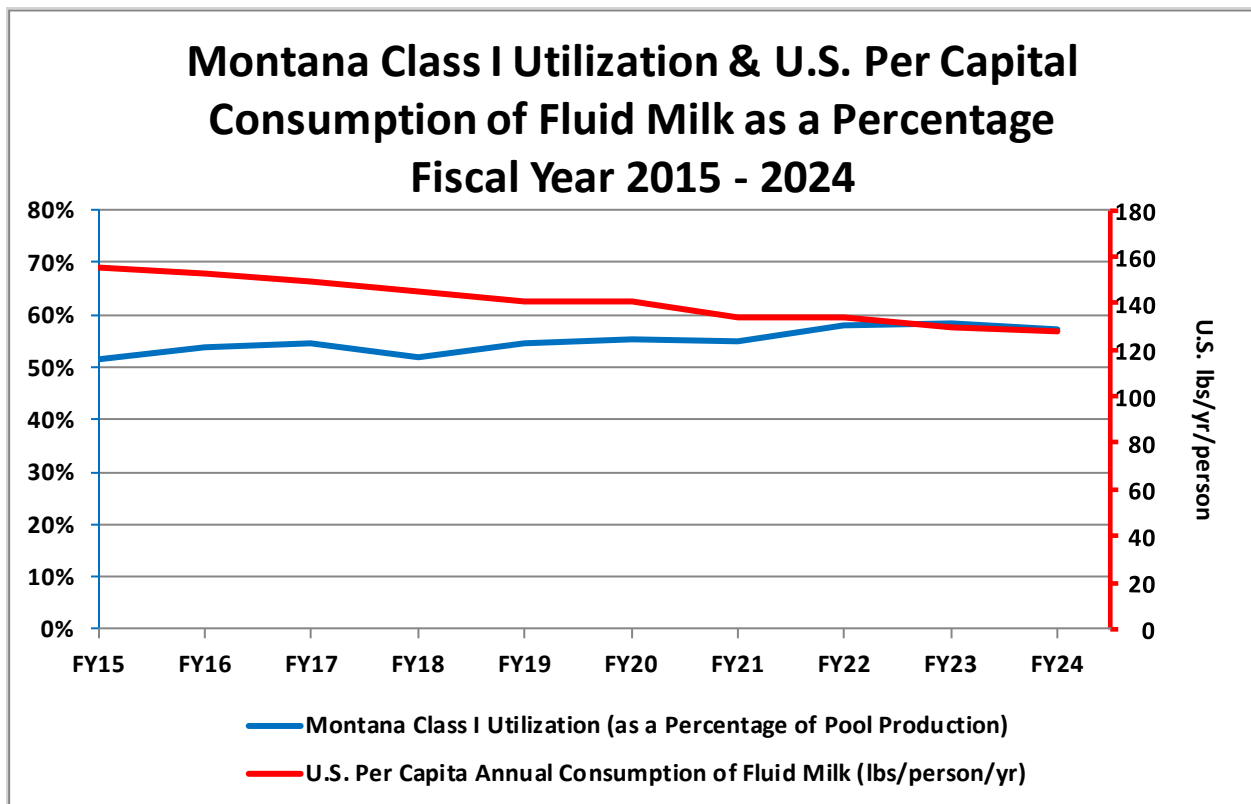
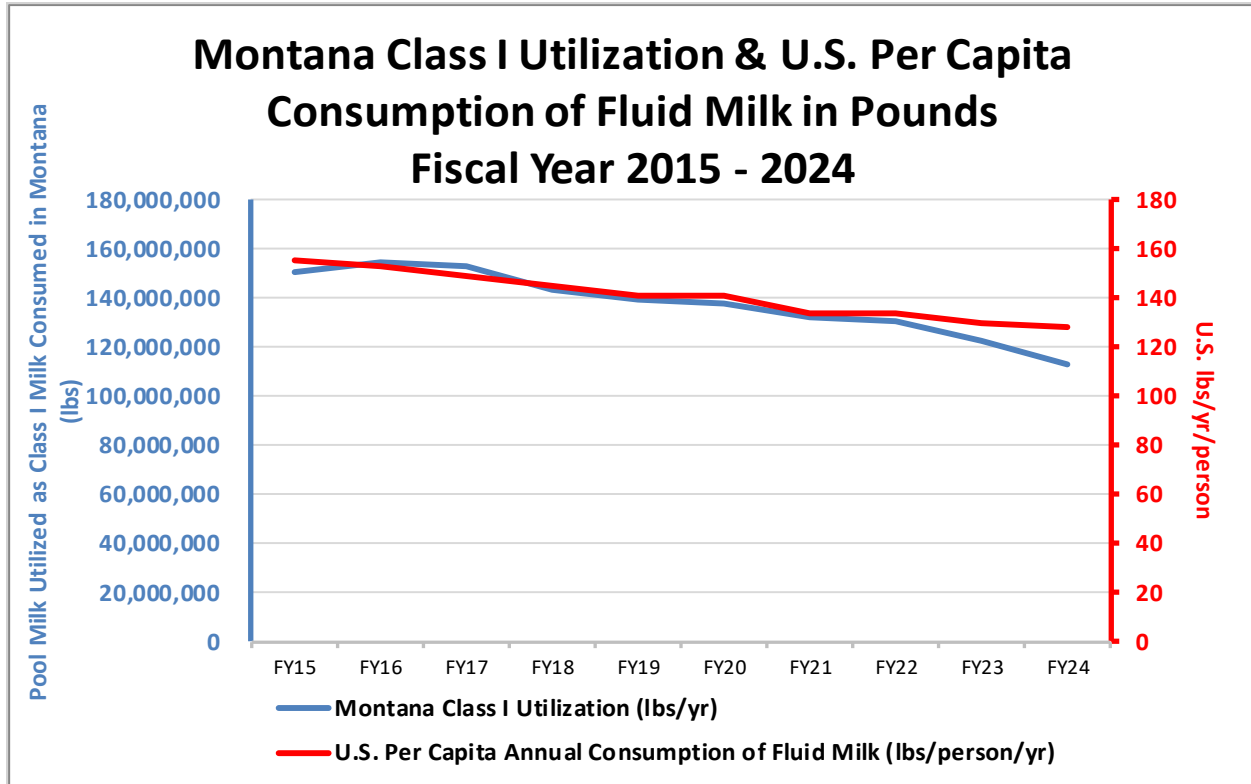


Fiscal Year 2024			
Plant Pool Production by Month	Class I	Class II	Class III
Jul	15,683,921	804,333	1,065,664
Aug	15,417,168	521,886	1,128,650
Sep	14,586,668	372,645	1,138,398
Oct	14,714,571	191,892	1,271,408
Nov	14,327,407	164,051	1,293,219
Dec	14,779,164	73,702	1,745,577
Jan	15,180,417	74,585	1,546,592
Feb	14,512,015	64,958	1,229,951
Mar	14,170,027	254,147	2,337,310
Apr	14,386,534	116,262	1,629,655
May	14,580,669	572,192	1,364,021
Jun	13,318,708	699,999	1,855,076



Fiscal Year 2024			
Plant Pool Production by Month	Class I	Class II	Class III
	Jul	89.35%	4.58%
Aug	90.33%	3.06%	6.61%
Sep	90.61%	2.31%	7.07%
Oct	90.95%	1.19%	7.86%
Nov	90.77%	1.04%	8.19%
Dec	89.04%	0.44%	10.52%
Jan	90.35%	0.44%	9.21%
Feb	91.81%	0.41%	7.78%
Mar	84.54%	1.52%	13.94%
Apr	89.18%	0.72%	10.10%
May	88.28%	3.46%	8.26%
Jun	83.90%	4.41%	11.69%

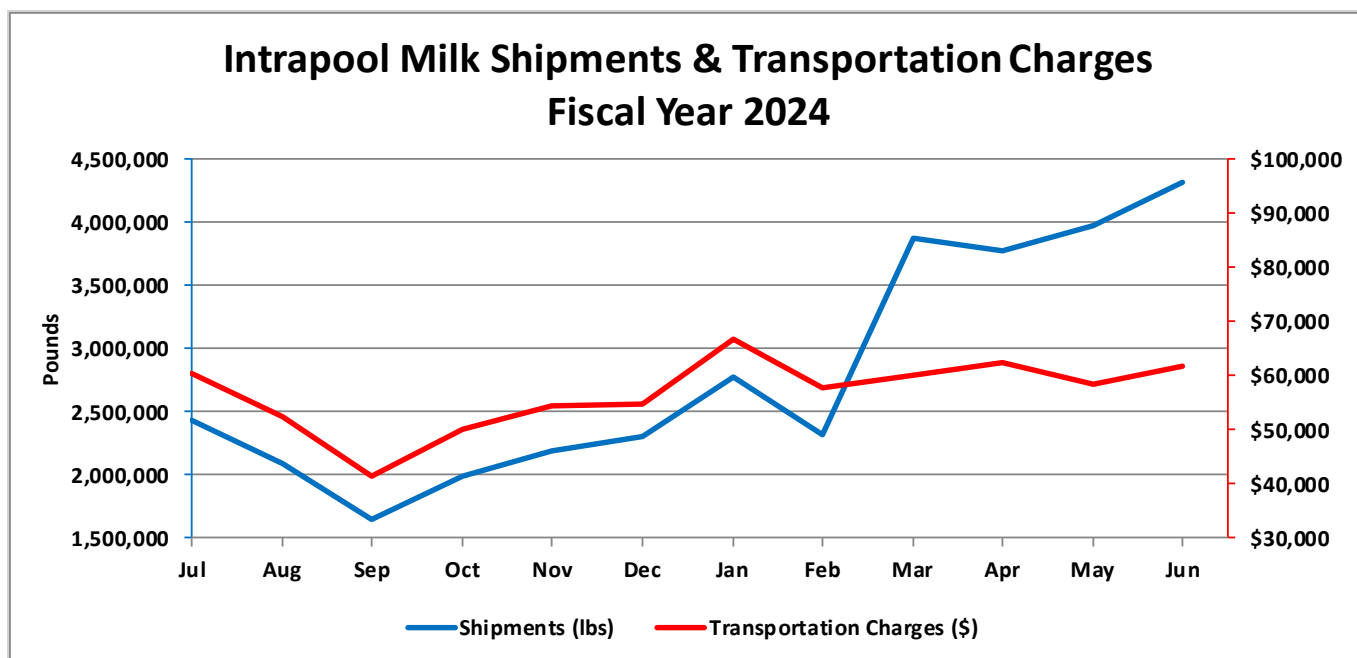
The following chart shows the percentage of Montana pool milk utilized as Class I milk consumed in the Montana market and the per capita consumption of fluid milk in the United States since Fiscal Year 2015. The USDA Fluid Beverage Milk Quantities by Product Annual Report was the source of per capita consumption information (<http://www.ers.usda.gov/data-products/dairy-data>, accessed September 2024). From Fiscal Year 2015 through Fiscal Year 2024, pool production averaged about 251 million pounds per year. The marked decline in production that started in Fiscal Year 2019 continued with a 5.94% decline in Fiscal Year 2024. Between Fiscal Year 2020 and Fiscal Year 2024, milk production saw an average fiscal year decline of approximately 12.20%. According to the World Population Review, Montana's population is expected to increase by 2.76% or approximately 37,590 people since Calendar Year 2020. The trend for the percentage of pool milk utilized as Class I milk consumed in Montana is one of decline, which corresponds to the trend of declining per capita consumption of fluid milk in the United States. Total utilization of pool milk as Class I milk consumed in Montana has decreased by roughly 24.7% since Fiscal Year 2015. Annual U.S. per capita consumption of fluid milk has declined by about 17.5%, from 155 pounds in Fiscal Year 2015 to 134 pounds in Fiscal Year 2024. The percentage of pool milk utilized as Class I milk consumed in Montana increased from 51.42% of pool production in Fiscal Year 2015 to 57.39% pool production in Fiscal Year 2024. The pool production of 57.39% in Fiscal Year 2024 was a decrease of 1.54% from the prior fiscal year. The increase in pool milk utilization percentage in Fiscal Year 2024 vs. Fiscal Year 2015 is a function of pool production decreasing more than Class I milk utilization decreasing (for the Montana market). Potential factors influencing the long-term decline of the percentage of Class I pool milk consumed in Montana include increased availability and possibly market share of ultra-pasteurized products (such as organic milk, lactose-free milk, and other specialty or branded products) that are imported into the state; loss of market share to a myriad of other beverage products, including plant-based milk substitutes; and changes in food distribution systems that have led to an increased imports of fluid milk by out-of-state distributors supplying Montana stores. Class II manufacturing in Montana accounts for a relatively small amount of utilization. Because production has been steadily declining and Montana dairy processors do not utilize a large percentage of pool milk for production of Class II and Class III products, the decrease in the amount of Class I pool milk consumed in Montana has resulted in an increase of Class I packaged surplus milk being exported.



Adjustment for Transportation Charges of Intrapool Milk Shipments

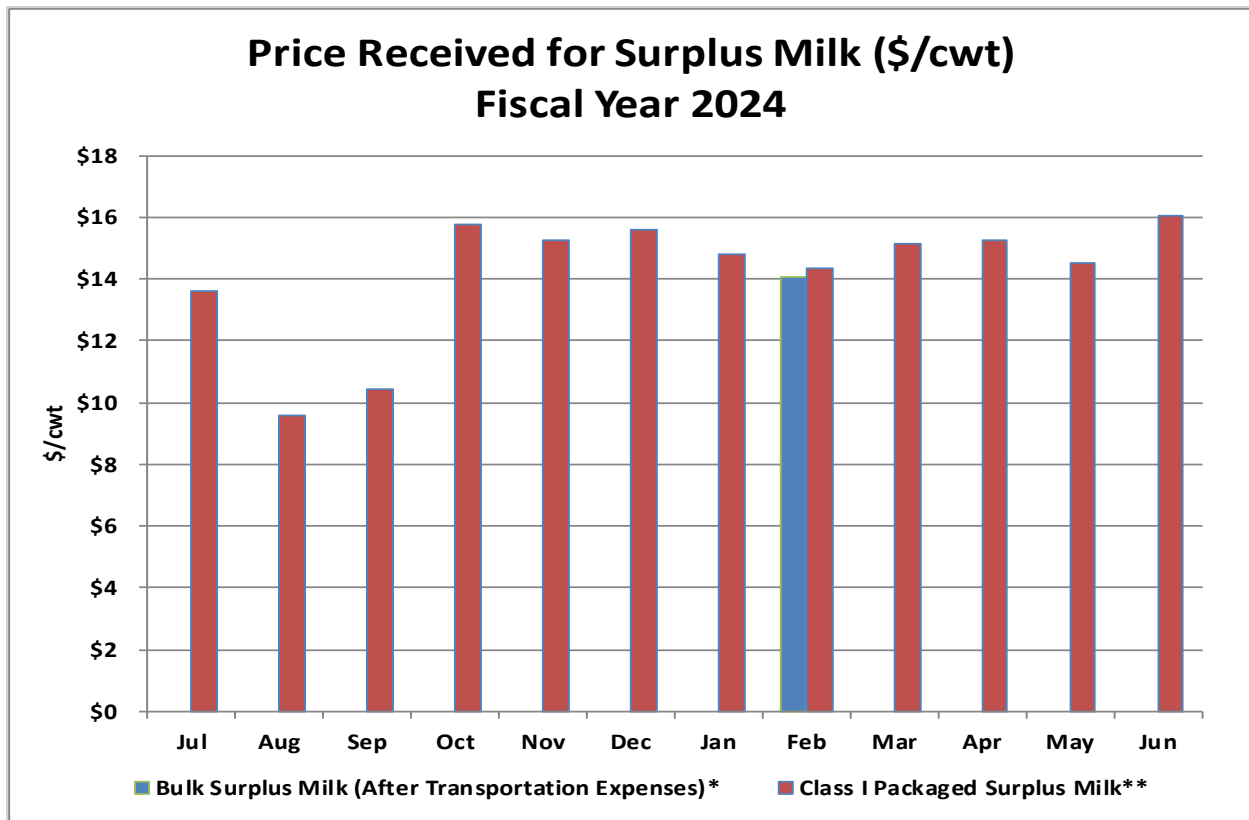
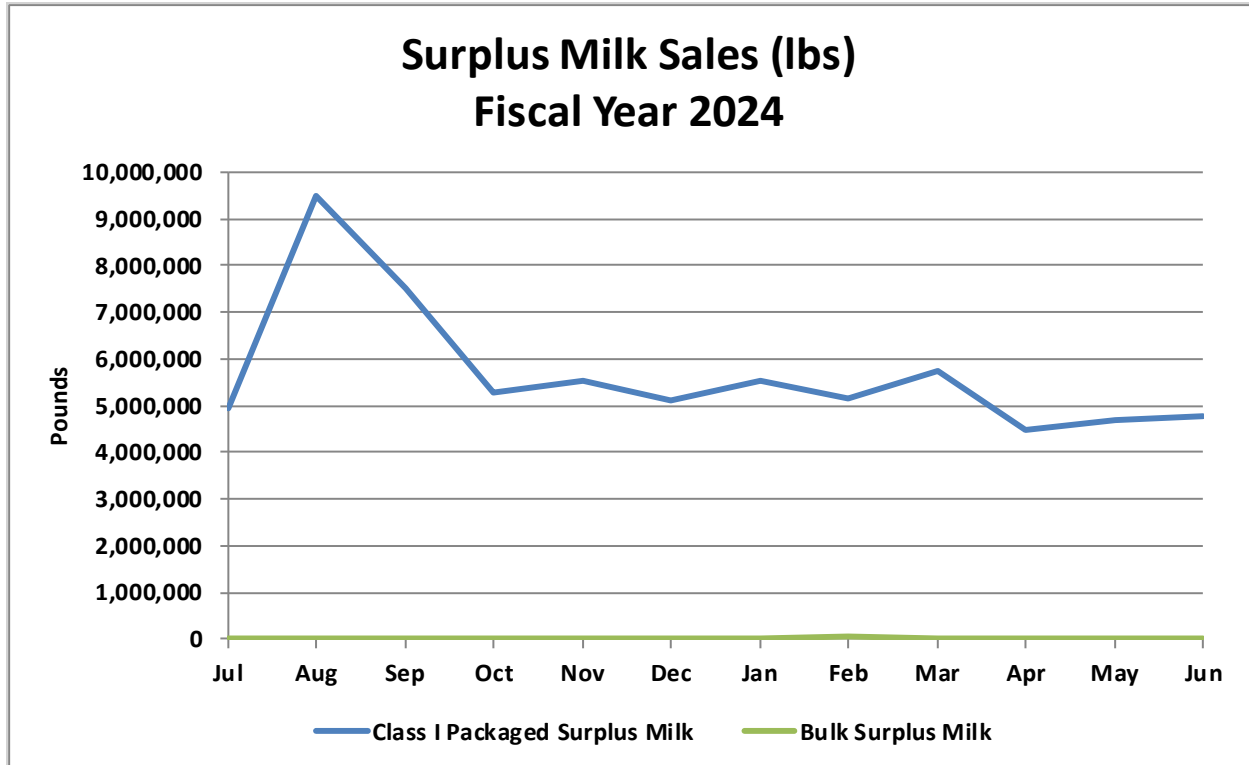
A negative adjustment to the skim milk utilization value is made for transportation charges for shipments of unprocessed pool milk between pool plants. In Fiscal Year 2024, the skim milk utilization value was reduced by \$681,740 for shipment of 33.7 million pounds of unprocessed pool milk (\$2.02/cwt average freight rate). Overall, the adjustment for intrapool milk shipments reduced the value of pool production by approximately \$0.35/cwt.

The following chart shows the volume of the intrapool shipments and total transportation charges for each month in Fiscal Year 2024. The charges were primarily driven by shipments from Meadow Gold – Great Falls to Meadow Gold – Billings. In Fiscal Year 2024, intrapool shipments of unprocessed pool milk also occurred from Meadow Gold – Great Falls to Meadow Gold – Billings and Meadow Gold – Great Falls to Darigold – Bozeman. The shipments going to Darigold-Bozeman were mostly from the producer who moved to the Meadow Gold – Billings plant in February 2024. Because of the location of the dairy to the Darigold – Bozeman plant no intrapool freight cost was charged to the pool. However, these pounds are included in the intrapool shipment pounds.



Sales of Surplus Milk

The following two charts show the monthly volume of sales of surplus milk by pool handlers and the unit price received for surplus milk sales after transportation expenses. There has been a significant shift in the sale of bulk surplus milk and Class I packaged surplus milk. All surplus milk sold in Fiscal Year 2024 was Class I packaged except for one load, which was sold out of state because of a tanker issue and was not actual surplus milk. The average monthly utilization of Class I surplus milk for fiscal year 2024 was 5,686,945 pounds, a decrease of 3.65% from the Fiscal Year 2023 amount of 5,902,229. This can be attributed to the loss of two dairies which resulted in a decreased production in Fiscal Year 2024.



*The price received for surplus Class I packaged milk excludes the value of associated cream and shrink.

Adjustments for Surplus Sales

Surplus milk is milk produced in Montana that is not consumed in Montana, excluding sales of cream to out-of-state markets, inventory, shrink, and dumped milk. Surplus sale factors allow for negative adjustments to the value of pool milk that reflect costs of marketing the surplus milk. Most of the surplus milk is sold as Class I packaged milk to out-of-state markets. In the Fiscal Year 2024, the overall adjustment for surplus sales (bulk and Class I packaged milk) totaled \$1,836,690.

Class I Packaged Surplus Milk

In Fiscal Year 2024, surplus sales adjustments for Class I packaged surplus milk reduced the utilization value by \$1,835,345. Overall, the adjustment for Class I packaged surplus milk sales reduced the value of pool production by \$0.931cwt.

Bulk Surplus Milk

In Fiscal Year 2024, surplus sales adjustments for bulk surplus milk reduced the utilization value by \$1,345. This was for the only load of bulk surplus milk in Fiscal Year 2024. Overall, the adjustment for bulk surplus milk sales reduced the value of pool production by \$0.0007/cwt.

Each bulk surplus milk sale is classified (Class I, Class II, or Class III) based upon how the purchasing plant utilizes the milk. In Fiscal Year 2024, all bulk surplus milk sales were Class III utilizations, and the adjustment was calculated by subtracting the Montana Class III value and transportation expenses from the value received for the sale of bulk surplus milk.

Combined Adjustments to Pool Milk Utilization Value

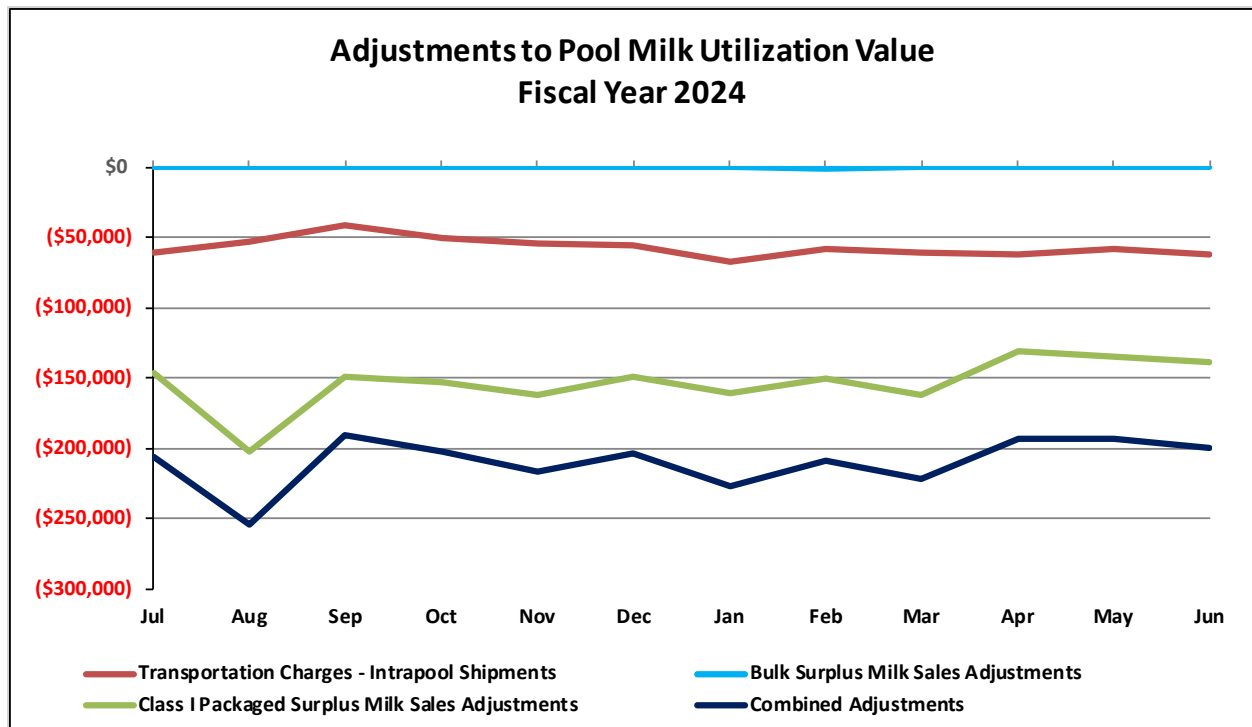
In Fiscal Year 2024, adjustments were made for transportation charges for shipments of unprocessed pool milk between pool plants, Class I packaged surplus milk sales, and bulk surplus milk sales. These adjustment reduced the pool value by over \$2.5 million (5.73%) or in other terms \$1.28/cwt. The table below summarizes the adjustments and their impact in terms of dollars per hundredweight of pool production and percentage of unadjusted utilization value.

Adjustments to Pool Milk Utilization Value in Fiscal Year 2024

Adjustment Description	Adjustment to Pool Milk Utilization Value (\$)	Adjustment to Pool Milk Utilization Value (\$/cwt of Pool Production)	Adjustment as a Percentage of Unadjusted Utilization Value
Transportation Charges - Intrapool	(\$681,740)	(\$0.3458)	(1.550%)
Class I Packaged Surplus Milk Sales	(\$1,835,345)	(\$0.9308)	(4.174%)
Bulk Surplus Milk Sales	(\$1,345)	(\$0.0007)	(0.003%)
Subtotal	(\$2,518,431)	(\$1.2773)	(5.728%)

	Pool Milk Utilization Value (\$)	Pool Milk Utilization Value (\$/cwt at actual butterfat)
Unadjusted Value	\$43,970,621	\$22.3005
Adjustments	(\$2,518,431)	(\$1.2773)
Adjusted Value	\$41,453,190	\$21.0237

The following chart shows the adjustments made to the pool utilization value throughout Fiscal Year 2024.



APPENDIX A – BOARD OF MILK CONTROL & RELATIONSHIP WITH MONTANA DEPARTMENT OF LIVESTOCK

