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## May Milk Production up 4.9 Percent

**Milk production** in the 24 major States during May totaled 18.9 billion pounds, up 4.9 percent from May 2020. April revised production, at 18.5 billion pounds, was up 3.7 percent from April 2020. The April revision represented an increase of 44 million pounds or 0.2 percent from last month's preliminary production estimate.

**Production per cow** in the 24 major States averaged 2,107 pounds for May, 63 pounds above May 2020.

**The number of milk cows** on farms in the 24 major States was 8.99 million head, 152,000 head more than May 2020, and 5,000 head more than April 2021.

## May Milk Production in the United States up 4.6 Percent

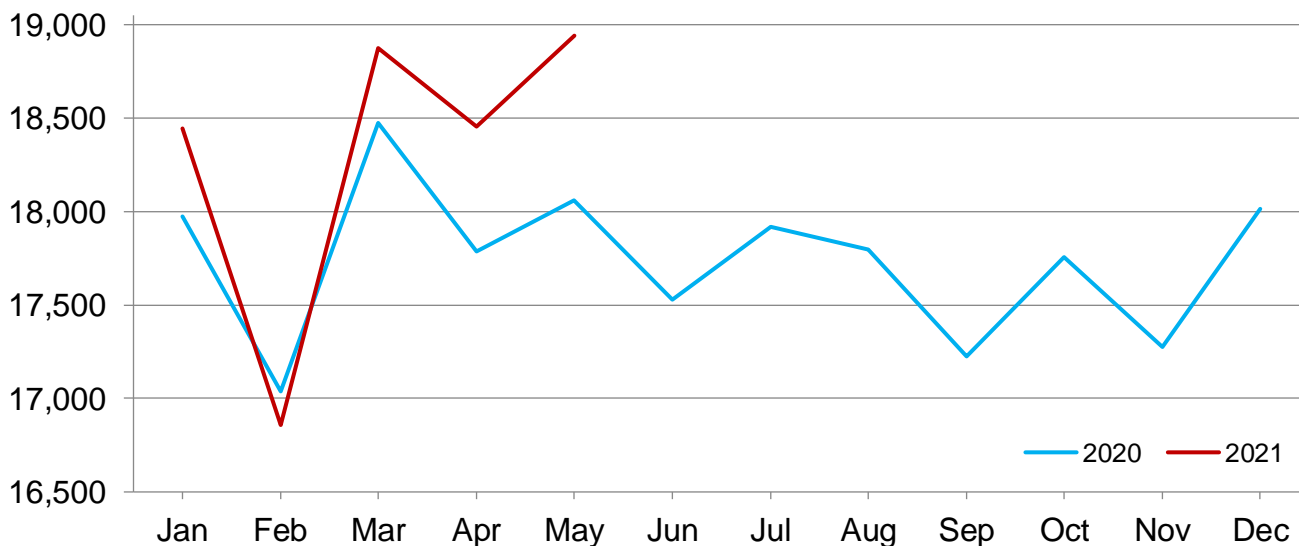
**Milk production** in the United States during May totaled 19.9 billion pounds, up 4.6 percent from May 2020.

**Production per cow** in the United States averaged 2,088 pounds for May, 61 pounds above May 2020.

**The number of milk cows** on farms in the United States was 9.51 million head, 145,000 head more than May 2020, and 5,000 head more than April 2021.

## Monthly Milk Production - 24 Selected States

Million pounds



## Milk Cows and Production by Quarter - United States: 2020-2021

[May not add due to rounding. Blank data cells indicate estimation period has not yet begun]

Quarter	Milk cows <sup>1</sup>		Milk per cow <sup>2</sup>		Milk production <sup>2</sup>		
	2020	2021	2020	2021	2020	2021	Change from 2020
	(1,000 head)	(1,000 head)	(pounds)	(pounds)	(million pounds)	(million pounds)	(percent)
January-March .....	9,378	9,460	5,990	6,002	56,174	56,775	1.1
April-June .....	9,364		5,988		56,070		
July-September .....	9,380		5,908		55,419		
October-December .....	9,429		5,892		55,557		
Annual .....	9,388		23,777		223,220		

<sup>1</sup> Includes dry cows. Excludes heifers not yet fresh.

<sup>2</sup> Excludes milk sucked by calves.

## Milk Cows and Production by Month – 24 Selected States: 2020-2021

[May not add due to rounding. Blank data cells indicate estimation period has not yet begun]

Month	Milk cows <sup>1</sup>		Milk per cow <sup>2</sup>		Milk production <sup>2</sup>		
	2020	2021	2020	2021	2020	2021	Change from 2020
	(1,000 head)	(1,000 head)	(pounds)	(pounds)	(million pounds)	(million pounds)	(percent)
January .....	8,837	8,934	2,034	2,065	17,974	18,446	2.6
February .....	8,848	8,947	1,926	1,884	17,038	16,858	-1.1
March .....	8,861	8,961	2,085	2,106	18,474	18,873	2.2
April .....	8,855	8,985	2,009	2,054	17,787	18,454	3.7
May .....	8,838	8,990	2,044	2,107	18,061	18,941	4.9
June .....	8,834		1,984		17,530		
July .....	8,854		2,024		17,919		
August .....	8,857		2,010		17,799		
September .....	8,877		1,941		17,226		
October .....	8,897		1,996		17,758		
November .....	8,914		1,938		17,274		
December .....	8,923		2,019		18,012		
Annual .....	8,866		24,008		212,852		

<sup>1</sup> Includes dry cows. Excludes heifers not yet fresh.

<sup>2</sup> Excludes milk sucked by calves.

## Estimated Milk Cows and Production by Month – United States: 2020-2021

[May not add due to rounding. Blank data cells indicate estimation period has not yet begun]

Month	Milk cows <sup>1</sup>		Milk per cow <sup>2</sup>		Milk production <sup>2</sup>		
	2020	2021	2020	2021	2020	2021	Change from 2020
	(1,000 head)	(1,000 head)	(pounds)	(pounds)	(million pounds)	(million pounds)	(percent)
January .....	9,365	9,447	2,016	2,046	18,877	19,328	2.4
February .....	9,377	9,460	1,908	1,868	17,895	17,667	-1.3
March .....	9,391	9,474	2,066	2,088	19,402	19,780	1.9
April .....	9,377	9,500	1,993	2,036	18,684	19,340	3.5
May .....	9,360	9,505	2,027	2,088	18,972	19,850	4.6
June .....	9,355		1,968		18,414		
July .....	9,372		2,001		18,756		
August .....	9,374		1,988		18,632		
September .....	9,395		1,919		18,031		
October .....	9,414		1,976		18,603		
November .....	9,432		1,919		18,103		
December .....	9,442		1,997		18,851		
Annual .....	9,388		23,777		223,220		

<sup>1</sup> Includes dry cows. Excludes heifers not yet fresh.

<sup>2</sup> Excludes milk sucked by calves.

## Milk Cows and Production – 24 Selected States: May 2020 and 2021

[May not add due to rounding]

State	Milk cows <sup>1</sup>		Milk per cow <sup>2</sup>		Milk production <sup>2</sup>		Change from 2020
	2020	2021	2020	2021	2020	2021	
	(1,000 head)	(1,000 head)	(pounds)	(pounds)	(million pounds)	(million pounds)	(percent)
Arizona .....	200	198	2,145	2,155	429	427	-0.5
California .....	1,721	1,720	2,070	2,175	3,562	3,741	5.0
Colorado .....	196	206	2,220	2,225	435	458	5.3
Florida .....	113	110	1,770	1,825	200	201	0.5
Georgia .....	82	82	1,855	1,890	152	155	2.0
Idaho .....	643	653	2,165	2,190	1,392	1,430	2.7
Illinois .....	82	83	1,875	1,890	154	157	1.9
Indiana .....	176	196	2,030	2,050	357	402	12.6
Iowa .....	217	228	2,095	2,120	455	483	6.2
Kansas .....	168	175	1,970	2,030	331	355	7.3
Michigan .....	428	445	2,310	2,335	989	1,039	5.1
Minnesota .....	443	462	1,930	1,960	855	906	6.0
New Mexico .....	328	330	2,030	2,140	666	706	6.0
New York .....	626	628	2,075	2,155	1,299	1,353	4.2
Ohio .....	253	260	1,880	1,890	476	491	3.2
Oregon .....	125	126	1,825	1,825	228	230	0.9
Pennsylvania .....	483	475	1,815	1,880	877	893	1.8
South Dakota .....	134	153	1,940	1,945	260	298	14.6
Texas .....	590	622	2,075	2,180	1,224	1,356	10.8
Utah .....	96	95	2,000	2,020	192	192	-
Vermont .....	123	119	1,780	1,870	219	223	1.8
Virginia .....	75	73	1,770	1,785	133	130	-2.3
Washington .....	279	277	2,105	2,100	587	582	-0.9
Wisconsin .....	1,257	1,274	2,060	2,145	2,589	2,733	5.6
24-State Total .....	8,838	8,990	2,044	2,107	18,061	18,941	4.9

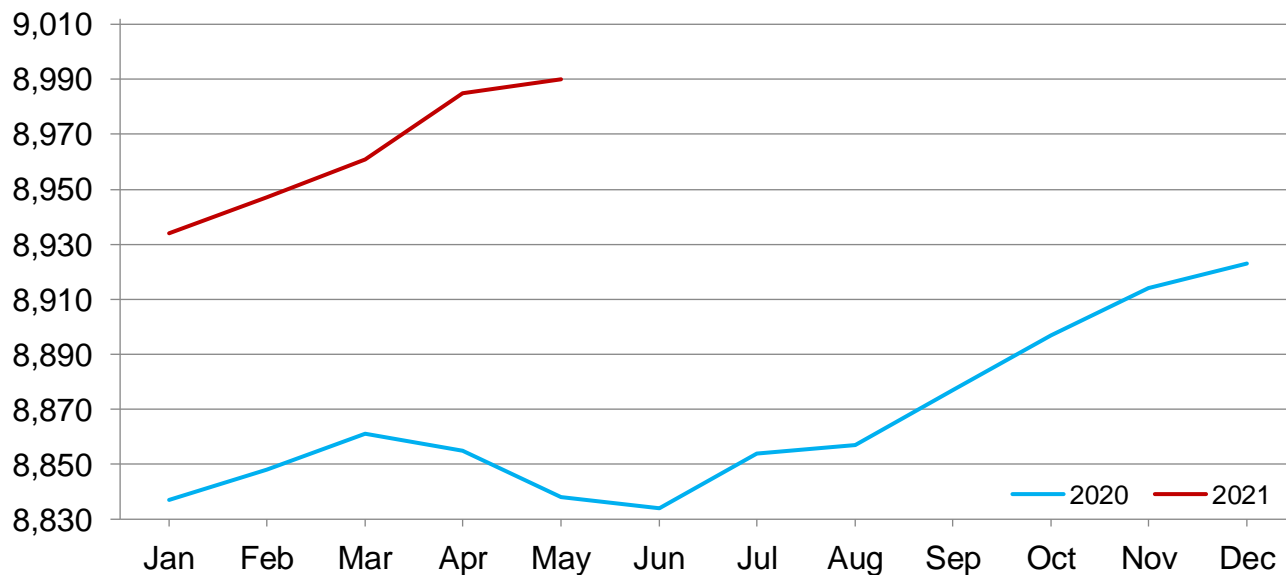
- Represents zero.

<sup>1</sup> Includes dry cows. Excludes heifers not yet fresh.

<sup>2</sup> Excludes milk sucked by calves.

## Monthly Milk Cows - 24 Selected States

Thousand head



## Milk Cows and Production – 24 Selected States: April 2020 and 2021

[May not add due to rounding]

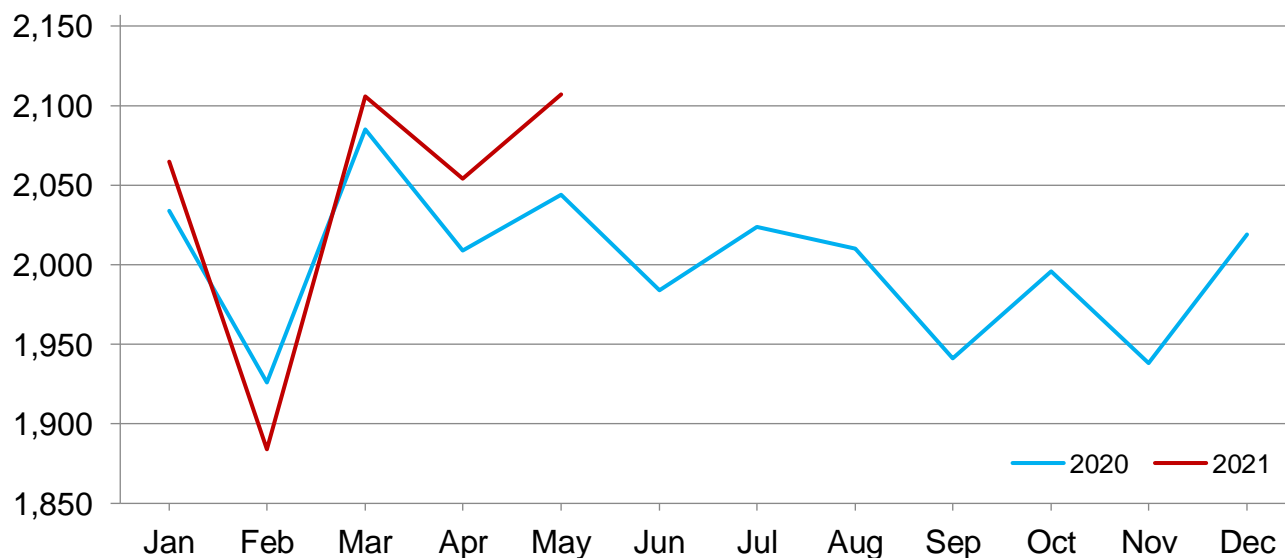
	Milk cows <sup>1</sup>		Milk per cow <sup>2</sup>		Milk production <sup>2</sup>		Change from 2020
	2020	2021	2020	2021	2020	2021	
	(1,000 head)	(1,000 head)	(pounds)	(pounds)	(million pounds)	(million pounds)	(percent)
Arizona .....	200	198	2,155	2,165	431	429	-0.5
California .....	1,721	1,720	2,035	2,120	3,502	3,646	4.1
Colorado .....	194	205	2,160	2,165	419	444	6.0
Florida .....	115	110	1,805	1,805	208	199	-4.3
Georgia .....	82	82	1,880	1,915	154	157	1.9
Idaho .....	647	653	2,090	2,105	1,352	1,375	1.7
Illinois .....	82	83	1,870	1,880	153	156	2.0
Indiana .....	176	195	1,990	2,000	350	390	11.4
Iowa .....	219	228	2,040	2,040	447	465	4.0
Kansas .....	169	175	1,960	2,005	331	351	6.0
Michigan .....	428	444	2,255	2,280	965	1,012	4.9
Minnesota .....	445	462	1,850	1,895	823	875	6.3
New Mexico .....	330	333	2,100	2,140	693	713	2.9
New York .....	626	626	2,045	2,095	1,280	1,311	2.4
Ohio .....	253	260	1,840	1,840	466	478	2.6
Oregon .....	125	126	1,760	1,755	220	221	0.5
Pennsylvania .....	485	475	1,820	1,840	883	874	-1.0
South Dakota .....	132	152	1,870	1,885	247	287	16.2
Texas .....	590	620	2,090	2,155	1,233	1,336	8.4
Utah .....	97	95	1,930	1,945	187	185	-1.1
Vermont .....	124	119	1,800	1,825	223	217	-2.7
Virginia .....	75	73	1,765	1,770	132	129	-2.3
Washington .....	280	277	2,030	2,020	568	560	-1.4
Wisconsin .....	1,260	1,274	2,000	2,075	2,520	2,644	4.9
24-State Total .....	8,855	8,985	2,009	2,054	17,787	18,454	3.7

<sup>1</sup> Includes dry cows. Excludes heifers not yet fresh.

<sup>2</sup> Excludes milk sucked by calves.

## Monthly Milk Per Cow - 24 Selected States

Pounds



## Statistical Methodology

**Survey Procedures:** Primary data used to determine these estimates were obtained from a sample of producers. Individual States maintain a list of all known milk producers and information on the size of their herd. States use all known sources of producers to ensure that their lists are as complete as possible. Generally, all large producers and a sample of small producers are included in the survey. Questionnaires are mailed to producers near the end of the month to obtain data for the first day of the month. Additional reports are obtained by telephone, as needed, to supplement the mail response. Where feasible, States utilize state and federal administrative data to estimate milk production. This eliminates duplication of data gathering by different government agencies such as Agricultural Marketing Service (AMS) Dairy Market News. Indications of milk cow inventory are also obtained in the January Cattle Survey.

**Estimation Procedures:** Regional Field Offices prepare these estimates by using a combination of survey indications, historic trends, and any available administrative data. Individual State estimates are reviewed by the Agricultural Statistics Board for reasonableness.

**Revision Policy:** Milk production, milk per cow, and number of milk cows are subject to revision the following month after initial publication for monthly States or the following quarter for the quarterly States. Normally, administrative data from Federal Market Orders, State Departments of Agriculture, or other sources are the main basis for revisions. However, administrative data for all States may not be available in time for these revisions. Estimates are again subject to revisions in February each year based on additional administrative data. In the event that additional changes are necessary, a third revision is possible in February the following year. Estimates are again reviewed after data from the five-year Census of Agriculture are available. No revisions are made after that date.

**Reliability:** Since all operations with dairy animals are not included in the sample, survey estimates are subject to sampling variability. Survey results are also subject to non-sampling errors such as omissions, duplications, and mistakes in reporting, recording, and processing the data. The effects of these errors cannot be measured directly. They are minimized through rigid quality controls in the data collection process and through a careful review of all reported data for consistency and reasonableness.

To assist users in evaluating the reliability of the estimates in this report, the "Root Mean Square Error" is shown for selected items in the table below. The "Root Mean Square Error" is a statistical measure based on past performance and is computed using the differences between first and final estimates. The "Root Mean Square Error" for the 24 State milk production estimates over the past 24 months is 0.4 percent. This means that chances are 2 out of 3 that the final estimate will not be above or below the current estimate of 18.9 billion pounds by more than 0.4 percent. Chances are 9 out of 10 that the difference will not exceed 0.7 percent.

### Reliability of Monthly Milk Production Estimates

[Based on data for the past 24 months]

Item	Root mean square error	90 percent confidence level	Difference between first and latest estimate				
			Average	Smallest	Largest	Months	
						Below latest	Above latest
	(percent)	(percent)	(1,000)	(1,000)	(1,000)	(number)	(number)
Milk production .....	0.4	0.7	54	0	150	19	4
All Milk cows .....	0.1	0.2	11	0	26	21	2

## Information Contacts

Listed below are the commodity specialists in the Livestock Branch of the National Agricultural Statistics Service to contact for additional information. E-mail inquiries may be sent to [nass@usda.gov](mailto:nass@usda.gov).

Travis Averill, Chief, Livestock Branch .....	(202) 692-0069
Scott Hollis, Head, Livestock Section .....	(202) 690-2424
Sherry Bertramsen – Livestock Slaughter .....	(202) 690-8632
Ryan Cowen – Cattle, Cattle on Feed .....	(202) 720-3040
Anthony Fischer – Hogs and Pigs .....	(202) 720-3106
Logan Hartley-Sanguinett – Sheep and Goats .....	(202) 690-3236
Mike Miller – Milk Production and Milk Cows .....	(202) 720-3278
Suzanne Richards – Dairy Products .....	(202) 720-4448

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- Cornell’s Mann Library has launched a new website housing NASS’s and other agency’s archived reports. The new website, <https://usda.library.cornell.edu>. All email subscriptions containing reports will be sent from the new website, <https://usda.library.cornell.edu>. To continue receiving the reports via e-mail, you will have to go to the new website, create a new account and re-subscribe to the reports. If you need instructions to set up an account or subscribe, they are located at: <https://usda.library.cornell.edu/help>. You should whitelist [notifications@usda-esmis.library.cornell.edu](mailto:notifications@usda-esmis.library.cornell.edu) in your email client to avoid the emails going into spam/junk folders.

For more information on NASS surveys and reports, call the NASS Agricultural Statistics Hotline at (800) 727-9540, 7:30 a.m. to 4:00 p.m. ET, or e-mail: [nass@usda.gov](mailto:nass@usda.gov).

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