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## December Milk Production up 3.2 Percent

**Milk production** in the 24 major States during December totaled 18.1 billion pounds, up 3.2 percent from December 2019. November revised production, at 17.3 billion pounds, was up 3.5 percent from November 2019. The November revision represented an increase of 56 million pounds or 0.3 percent from last month's preliminary production estimate.

**Production per cow** in the 24 major States averaged 2,027 pounds for December, 40 pounds above December 2019.

**The number of milk cows** on farms in the 24 major States was 8.92 million head, 107,000 head more than December 2019, and 12,000 head more than November 2020.

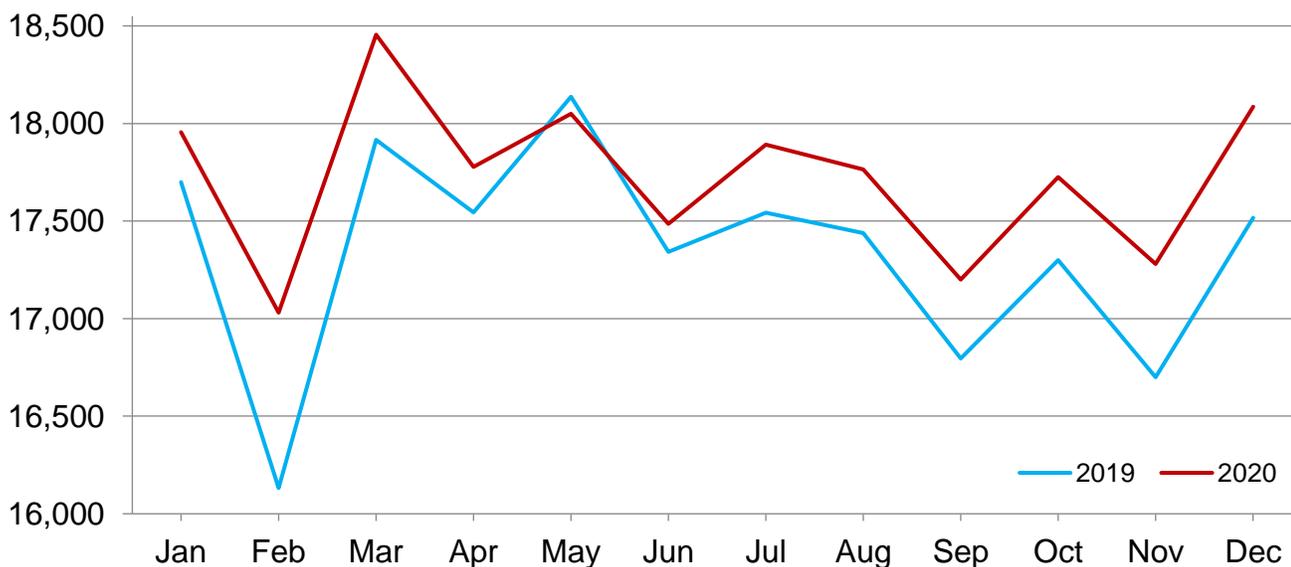
## October-December Milk Production up 3.0 Percent

**Milk production** in the United States during the October - December quarter totaled 55.6 billion pounds, up 3.0 percent from the October - December quarter last year.

**The average number of milk cows** in the United States during the quarter was 9.43 million head, 59,000 head more than the July - September quarter, and 81,000 head more than the same period last year.

## Monthly Milk Production - 24 Selected States

Million pounds



## Milk Cows and Production by Quarter - United States: 2019-2020

[May not add due to rounding]

Quarter	Milk cows <sup>1</sup>		Milk per cow <sup>2</sup>		Milk production <sup>2</sup>		
	2019	2020	2019	2020	2019	2020	Change from 2019
	(1,000 head)	(1,000 head)	(pounds)	(pounds)	(million pounds)	(million pounds)	(percent)
January-March .....	9,346	9,374	5,823	5,988	54,423	56,130	3.1
April-June .....	9,331	9,362	5,971	5,981	55,716	55,997	0.5
July-September .....	9,322	9,367	5,818	5,906	54,237	55,324	2.0
October-December .....	9,345	9,426	5,779	5,899	54,006	55,604	3.0
Annual .....	9,336	9,382	23,391	23,775	218,382	223,055	2.1

<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: 2019-2020

[May not add due to rounding]

Month	Milk cows <sup>1</sup>		Milk per cow <sup>2</sup>		Milk production <sup>2</sup>		
	2019	2020	2019	2020	2019	2020	Change from 2019
	(1,000 head)	(1,000 head)	(pounds)	(pounds)	(million pounds)	(million pounds)	(percent)
January .....	8,805	8,834	2,010	2,033	17,699	17,956	1.5
February .....	8,803	8,848	1,833	1,925	16,132	17,031	5.6
March .....	8,789	8,857	2,038	2,084	17,916	18,455	3.0
April .....	8,788	8,852	1,996	2,008	17,544	17,778	1.3
May .....	8,790	8,836	2,063	2,043	18,137	18,049	-0.5
June .....	8,784	8,827	1,974	1,981	17,342	17,486	0.8
July .....	8,785	8,840	1,997	2,024	17,542	17,891	2.0
August .....	8,789	8,845	1,984	2,008	17,439	17,764	1.9
September .....	8,805	8,864	1,908	1,941	16,796	17,201	2.4
October .....	8,819	8,886	1,962	1,995	17,299	17,726	2.5
November .....	8,817	8,911	1,894	1,939	16,699	17,280	3.5
December .....	8,816	8,923	1,987	2,027	17,517	18,086	3.2
Annual .....	8,799	8,860	23,646	24,007	208,062	212,703	2.2

<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: 2019-2020

[May not add due to rounding]

Month	Milk cows <sup>1</sup>		Milk per cow <sup>2</sup>		Milk production <sup>2</sup>		
	2019	2020	2019	2020	2019	2020	Change from 2019
	(1,000 head)	(1,000 head)	(pounds)	(pounds)	(million pounds)	(million pounds)	(percent)
January .....	9,354	9,361	1,990	2,015	18,612	18,860	1.3
February .....	9,352	9,375	1,814	1,908	16,966	17,890	5.4
March .....	9,333	9,385	2,019	2,065	18,845	19,380	2.8
April .....	9,332	9,375	1,975	1,992	18,433	18,675	1.3
May .....	9,333	9,360	2,042	2,025	19,058	18,955	-0.5
June .....	9,327	9,350	1,954	1,964	18,225	18,367	0.8
July .....	9,315	9,358	1,973	2,001	18,375	18,726	1.9
August .....	9,318	9,362	1,960	1,986	18,267	18,594	1.8
September .....	9,333	9,381	1,885	1,919	17,595	18,004	2.3
October .....	9,347	9,405	1,940	1,974	18,135	18,565	2.4
November .....	9,345	9,431	1,873	1,919	17,506	18,098	3.4
December .....	9,343	9,443	1,966	2,006	18,365	18,941	3.1
Annual .....	9,336	9,382	23,391	23,775	218,382	223,055	2.1

<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: December 2019 and 2020

[May not add due to rounding]

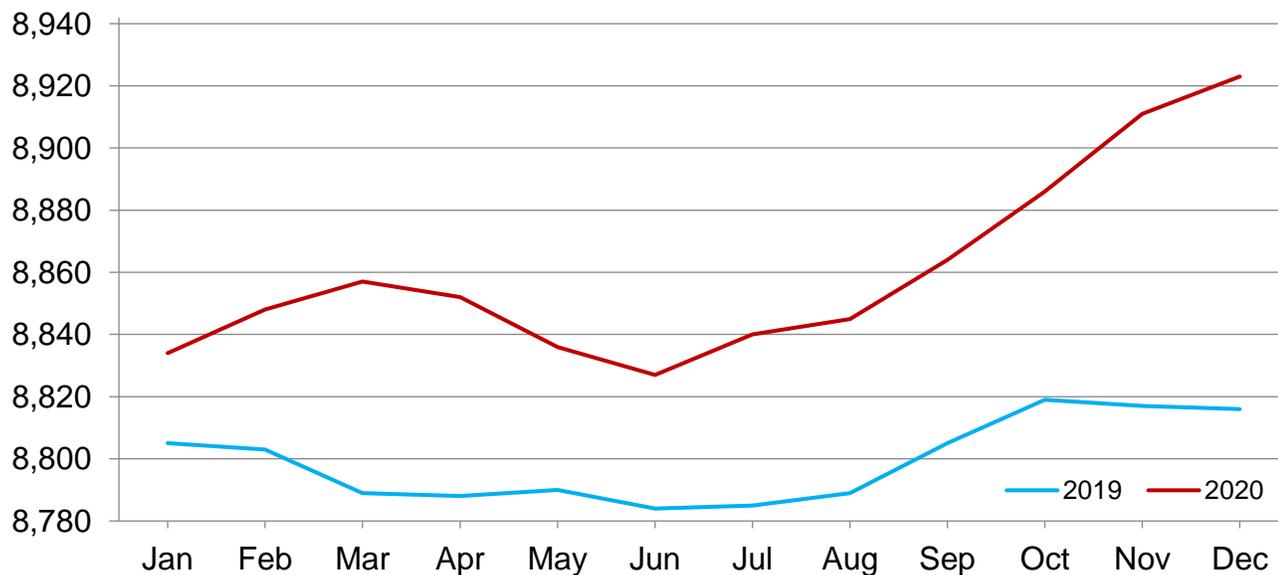
State	Milk cows <sup>1</sup>		Milk per cow <sup>2</sup>		Milk production <sup>2</sup>		Change from 2019
	2019	2020	2019	2020	2019	2020	
	(1,000 head)	(1,000 head)	(pounds)	(pounds)	(million pounds)	(million pounds)	(percent)
Arizona .....	194	196	2,105	2,095	408	411	0.7
California .....	1,725	1,720	1,975	2,045	3,407	3,517	3.2
Colorado .....	189	201	2,185	2,185	413	439	6.3
Florida .....	116	111	1,740	1,730	202	192	-5.0
Georgia .....	81	81	1,875	1,865	152	151	-0.7
Idaho .....	635	646	2,085	2,075	1,324	1,340	1.2
Illinois .....	82	84	1,810	1,845	148	155	4.7
Indiana .....	176	191	1,920	1,940	338	371	9.8
Iowa .....	215	220	2,080	2,120	447	466	4.3
Kansas .....	167	173	2,010	2,040	336	353	5.1
Michigan .....	427	439	2,225	2,270	950	997	4.9
Minnesota .....	445	455	1,870	1,915	832	871	4.7
New Mexico .....	330	337	2,070	2,100	683	708	3.7
New York .....	626	626	2,025	2,070	1,268	1,296	2.2
Ohio .....	252	258	1,810	1,860	456	480	5.3
Oregon .....	127	125	1,695	1,710	215	214	-0.5
Pennsylvania .....	483	478	1,745	1,790	843	856	1.5
South Dakota .....	127	141	1,920	1,935	244	273	11.9
Texas .....	580	613	2,085	2,120	1,209	1,300	7.5
Utah .....	97	95	1,910	1,940	185	184	-0.5
Vermont .....	124	120	1,805	1,810	224	217	-3.1
Virginia .....	74	74	1,700	1,725	126	128	1.6
Washington .....	282	279	2,000	2,005	564	559	-0.9
Wisconsin .....	1,262	1,260	2,015	2,070	2,543	2,608	2.6
24-State Total .....	8,816	8,923	1,987	2,027	17,517	18,086	3.2

<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: November 2019 and 2020

[May not add due to rounding]

	Milk cows <sup>1</sup>		Milk per cow <sup>2</sup>		Milk production <sup>2</sup>		Change from 2019
	2019	2020	2019	2020	2019	2020	
	(1,000 head)	(1,000 head)	(pounds)	(pounds)	(million pounds)	(million pounds)	(percent)
Arizona .....	196	196	1,990	1,995	390	391	0.3
California .....	1,725	1,720	1,895	1,945	3,269	3,345	2.3
Colorado .....	190	201	2,085	2,110	396	424	7.1
Florida .....	117	111	1,570	1,570	184	174	-5.4
Georgia .....	81	81	1,755	1,755	142	142	-
Idaho .....	634	646	2,000	2,005	1,268	1,295	2.1
Illinois .....	82	84	1,700	1,730	139	145	4.3
Indiana .....	176	191	1,825	1,865	321	356	10.9
Iowa .....	216	219	1,980	2,005	428	439	2.6
Kansas .....	165	173	1,920	1,965	317	340	7.3
Michigan .....	427	436	2,125	2,180	907	950	4.7
Minnesota .....	446	455	1,770	1,835	789	835	5.8
New Mexico .....	330	332	1,970	2,005	650	666	2.5
New York .....	626	626	1,940	1,985	1,214	1,243	2.4
Ohio .....	252	257	1,730	1,780	436	457	4.8
Oregon .....	127	125	1,645	1,650	209	206	-1.4
Pennsylvania .....	485	482	1,665	1,720	808	829	2.6
South Dakota .....	127	140	1,825	1,880	232	263	13.4
Texas .....	575	608	1,955	2,030	1,124	1,234	9.8
Utah .....	97	95	1,860	1,880	180	179	-0.6
Vermont .....	124	120	1,725	1,725	214	207	-3.3
Virginia .....	74	74	1,610	1,630	119	121	1.7
Washington .....	281	279	1,930	1,930	542	538	-0.7
Wisconsin .....	1,264	1,260	1,915	1,985	2,421	2,501	3.3
24-State Total .....	8,817	8,911	1,894	1,939	16,699	17,280	3.5

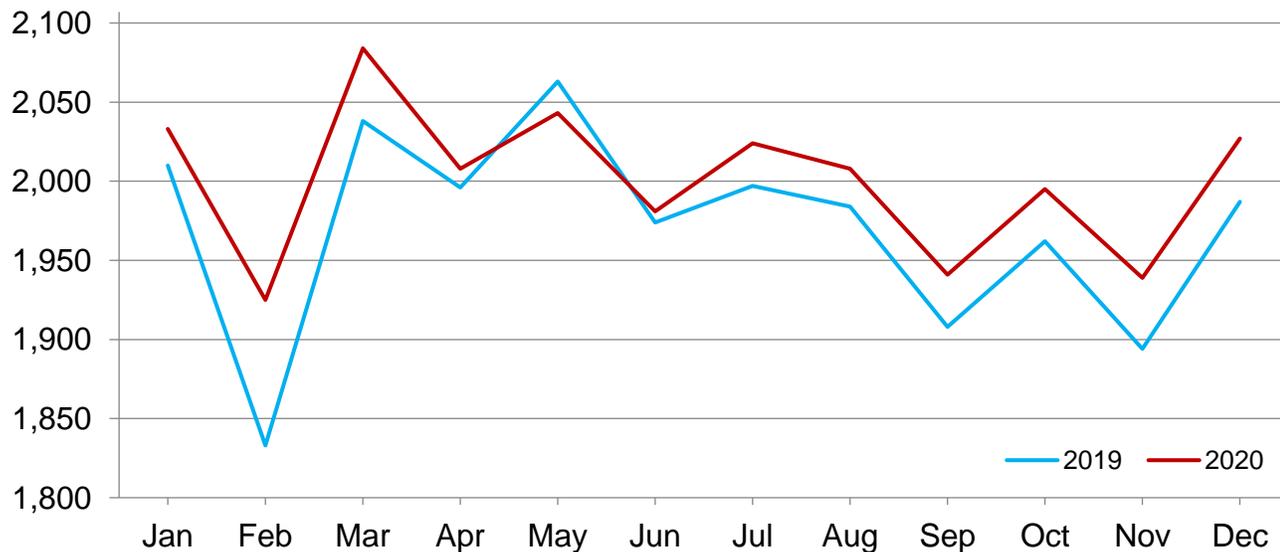
- Represents zero.

<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



## Milk Cows and Production – States and United States: Revised July - September 2019 and 2020

[May not add due to rounding]

State	July - September milk cows <sup>1</sup>		July - September milk production <sup>2</sup>		
	2019	2020	2019	2020	Change from 2019
	(1,000 head)	(1,000 head)	(million pounds)	(million pounds)	(percent)
Alabama .....	4.5	3.2	12.0	9.0	-25.0
Alaska .....	(D)	(D)	(D)	(D)	(NA)
Arizona .....	195.0	196.0	1,099.0	1,089.0	-0.9
Arkansas .....	5.0	5.0	15.0	14.0	-6.7
California .....	1,725.0	1,721.0	9,920.0	10,112.0	1.9
Colorado .....	188.0	198.0	1,222.0	1,313.0	7.4
Connecticut .....	19.0	19.0	104.0	105.0	1.0
Delaware .....	4.0	3.8	16.2	16.4	1.2
Florida .....	116.0	111.0	537.0	519.0	-3.4
Georgia .....	80.0	80.0	409.0	410.0	0.2
Hawaii .....	(D)	(D)	(D)	(D)	(NA)
Idaho .....	628.0	645.0	4,041.0	4,176.0	3.3
Illinois .....	83.0	83.0	412.0	424.0	2.9
Indiana .....	175.0	186.0	985.0	1,084.0	10.1
Iowa .....	217.0	218.0	1,300.0	1,335.0	2.7
Kansas .....	162.0	170.0	947.0	1,002.0	5.8
Kentucky .....	49.0	47.0	213.0	215.0	0.9
Louisiana .....	10.0	9.5	27.0	27.0	-
Maine .....	29.0	27.0	157.0	147.0	-6.4
Maryland .....	42.0	42.0	197.0	209.0	6.1
Massachusetts .....	10.0	10.0	47.0	48.0	2.1
Michigan .....	427.0	429.0	2,854.0	2,933.0	2.8
Minnesota .....	447.0	443.0	2,503.0	2,568.0	2.6
Mississippi .....	8.0	8.5	27.0	28.0	3.7
Missouri .....	77.0	75.0	258.0	253.0	-1.9
Montana .....	11.5	11.5	66.0	64.0	-3.0
Nebraska .....	58.0	59.0	345.0	360.0	4.3
Nevada .....	33.0	31.0	193.0	190.0	-1.6
New Hampshire .....	11.0	11.0	59.0	57.0	-3.4
New Jersey .....	4.8	4.7	24.0	24.0	-
New Mexico .....	327.0	326.0	2,042.0	1,989.0	-2.6
New York .....	627.0	626.0	3,805.0	3,838.0	0.9
North Carolina .....	41.0	40.0	213.0	210.0	-1.4
North Dakota .....	15.0	15.0	83.0	84.0	1.2
Ohio .....	251.0	254.0	1,350.0	1,404.0	4.0
Oklahoma .....	41.0	41.0	170.0	165.0	-2.9
Oregon .....	124.0	123.0	656.0	651.0	-0.8
Pennsylvania .....	485.0	482.0	2,461.0	2,521.0	2.4
Rhode Island .....	0.7	0.5	2.7	2.7	-
South Carolina .....	11.0	10.0	45.0	40.0	-11.1
South Dakota .....	124.0	138.0	711.0	803.0	12.9
Tennessee .....	31.0	29.0	126.0	126.0	-
Texas .....	567.0	594.0	3,455.0	3,662.0	6.0
Utah .....	97.0	95.0	574.0	557.0	-3.0
Vermont .....	126.0	121.0	674.0	638.0	-5.3
Virginia .....	74.0	74.0	352.0	361.0	2.6
Washington .....	281.0	279.0	1,746.0	1,732.0	-0.8
West Virginia .....	6.0	6.0	22.0	22.0	-
Wisconsin .....	1,267.0	1,257.0	7,722.0	7,735.0	0.2
Wyoming .....	6.0	8.0	37.0	50.5	36.5
Other States <sup>3</sup> .....	1.0	0.8	0.9	1.0	11.1
United States .....	9,322.0	9,367.0	54,237.0	55,324.0	2.0

- Represents zero.

(D) Withheld to avoid disclosing data for individual operations.

(NA) Not available.

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

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

<sup>3</sup> Other States includes Alaska and Hawaii.

# Milk Cows and Production – States and United States: Preliminary October - December 2019 and 2020

[May not add due to rounding]

State	October - December milk cows <sup>1</sup>		October - December milk production <sup>2</sup>		
	2019	2020	2019	2020	Change from 2019
	(1,000 head)	(1,000 head)	(million pounds)	(million pounds)	(percent)
Alabama .....	4.0	3.0	12.0	10.0	-16.7
Alaska .....	(D)	(D)	(D)	(D)	(NA)
Arizona .....	196.0	196.0	1,189.0	1,186.0	-0.3
Arkansas .....	5.0	5.0	15.0	14.0	-6.7
California .....	1,725.0	1,720.0	10,023.0	10,242.0	2.2
Colorado .....	190.0	201.0	1,219.0	1,302.0	6.8
Connecticut .....	19.5	19.0	107.0	108.0	0.9
Delaware .....	3.8	3.7	16.7	16.4	-1.8
Florida .....	117.0	111.0	565.0	537.0	-5.0
Georgia .....	81.0	81.0	433.0	434.0	0.2
Hawaii .....	(D)	(D)	(D)	(D)	(NA)
Idaho .....	634.0	646.0	3,916.0	3,990.0	1.9
Illinois .....	82.0	84.0	424.0	446.0	5.2
Indiana .....	176.0	191.0	997.0	1,101.0	10.4
Iowa .....	216.0	219.0	1,318.0	1,357.0	3.0
Kansas .....	165.0	173.0	977.0	1,034.0	5.8
Kentucky .....	49.0	47.0	223.0	220.0	-1.3
Louisiana .....	10.0	10.0	31.0	31.0	-
Maine .....	28.0	27.0	147.0	143.0	-2.7
Maryland .....	42.0	43.0	208.0	221.0	6.3
Massachusetts .....	10.0	10.0	48.0	47.0	-2.1
Michigan .....	427.0	435.0	2,811.0	2,925.0	4.1
Minnesota .....	446.0	452.0	2,446.0	2,562.0	4.7
Mississippi .....	8.0	8.0	30.0	31.0	3.3
Missouri .....	77.0	75.0	254.0	259.0	2.0
Montana .....	12.0	11.0	64.0	62.0	-3.1
Nebraska .....	58.0	60.0	355.0	367.0	3.4
Nevada .....	32.0	31.0	184.0	185.0	0.5
New Hampshire .....	11.0	11.0	57.0	56.0	-1.8
New Jersey .....	4.7	4.6	24.0	24.0	-
New Mexico .....	330.0	334.0	2,006.0	2,060.0	2.7
New York .....	626.0	626.0	3,743.0	3,813.0	1.9
North Carolina .....	41.0	40.0	217.0	213.0	-1.8
North Dakota .....	15.0	15.0	80.0	82.0	2.5
Ohio .....	252.0	257.0	1,343.0	1,411.0	5.1
Oklahoma .....	41.0	41.0	179.0	174.0	-2.8
Oregon .....	127.0	125.0	644.0	636.0	-1.2
Pennsylvania .....	484.0	481.0	2,478.0	2,533.0	2.2
Rhode Island .....	0.6	0.5	2.6	2.6	-
South Carolina .....	11.0	10.0	47.0	42.0	-10.6
South Dakota .....	127.0	140.0	717.0	810.0	13.0
Tennessee .....	31.0	29.0	130.0	130.0	-
Texas .....	577.0	608.0	3,503.0	3,800.0	8.5
Utah .....	97.0	95.0	554.0	548.0	-1.1
Vermont .....	124.0	120.0	662.0	636.0	-3.9
Virginia .....	74.0	74.0	365.0	372.0	1.9
Washington .....	281.0	279.0	1,675.0	1,665.0	-0.6
West Virginia .....	6.0	6.0	21.0	21.0	-
Wisconsin .....	1,264.0	1,259.0	7,507.0	7,692.0	2.5
Wyoming .....	6.0	8.0	37.2	51.8	39.2
Other States <sup>3</sup> .....	1.1	0.8	1.2	1.3	8.3
United States .....	9,345.0	9,426.0	54,006.0	55,604.0	3.0

- Represents zero.

(D) Withheld to avoid disclosing data for individual operations.

(NA) Not available.

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

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

<sup>3</sup> Other States includes Alaska and Hawaii.

## 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. Indications of milk cow inventory are also obtained in the January Cattle Surveys.

**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 on the next page. 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 milk production estimates over the past 20 quarters is 0.1 percent. This means that chances are 2 out of 3 that the final estimate will not be above or below the current estimate of 55.6 billion pounds by more than 0.1 percent. Chances are 9 out of 10 that the difference will not exceed 0.2 percent.

### Reliability of Quarterly Milk Production Estimates

[Based on data for the past 20 quarters]

Item	Root mean square error	90 percent confidence level	Difference between first and latest estimate				
			Average	Smallest	Largest	Quarters	
						Below latest	Above latest
	(percent)	(percent)	(1,000)	(1,000)	(1,000)	(number)	(number)
Milk production .....	0.1	0.2	48	4	184	11	9
All milk cows .....	0.1	0.2	8	0	26	14	4

## 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).

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Scott Hollis, Head, Livestock Section .....	(202) 690-2424
Sherry Bertramsen – Livestock Slaughter .....	(202) 690-8632
Holly Brenize – Sheep and Goats .....	(202) 720-0585
Ryan Cowen – Cattle, Cattle on Feed .....	(202) 720-3040
Mike Miller – Milk Production and Milk Cows .....	(202) 720-3278
Suzanne Richards – Dairy Products .....	(202) 720-4448
Seth Riggins – Hogs and Pigs .....	(202) 720-3106

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