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September Milk Production up 1.6 Percent

Milk production in the 24 major States during September totaled 16.8 billion pounds, up 1.6 percent from September 2018. August revised production at 17.5 billion pounds, was up 0.5 percent from August 2018. The August revision represented an increase of 32 million pounds or 0.2 percent from last month's preliminary production estimate.

Production per cow in the 24 major States averaged 1,913 pounds for September, 33 pounds above September 2018.

The number of milk cows on farms in the 24 major States was 8.80 million head, 11,000 head less than September 2018, but 7,000 head more than August 2019.

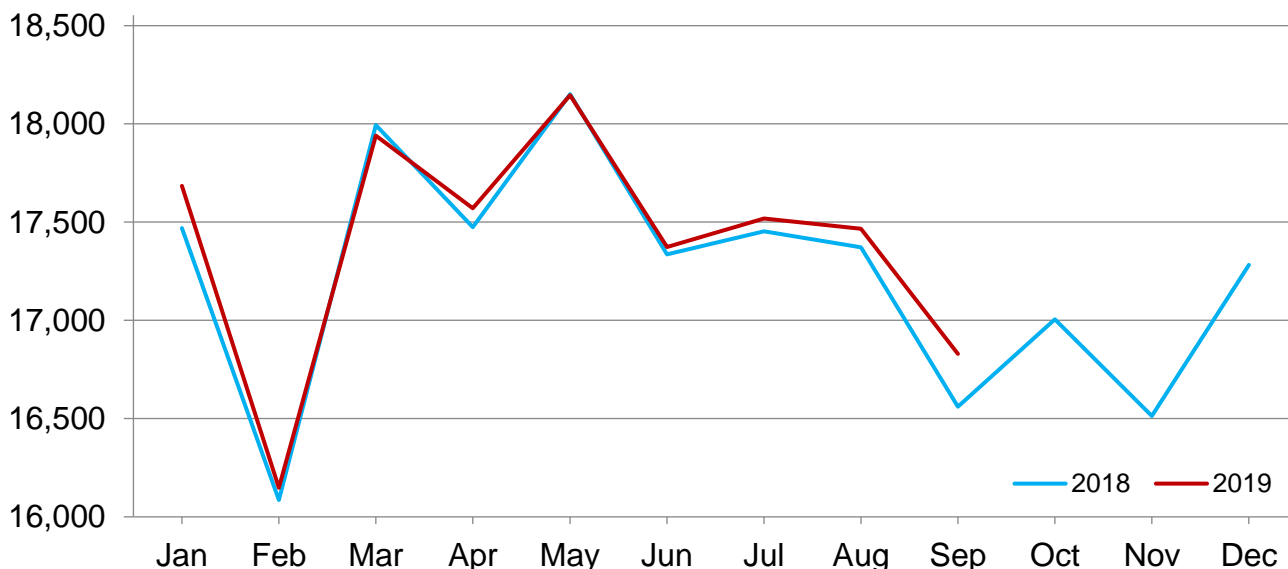
July-September Milk Production up 0.5 Percent

Milk production in the United States during the July - September quarter totaled 54.3 billion pounds, up 0.5 percent from the July - September quarter last year.

The average number of milk cows in the United States during the quarter was 9.32 million head, 10,000 head less than the April - June quarter, and 66,000 head less than the same period last year.

Monthly Milk Production – 24 Selected States

Million pounds



Milk Cows and Production by Quarter – United States: 2018-2019

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

Quarter	Milk cows ¹		Milk per cow ²		Milk production ²		
	2018	2019	2018	2019	2018	2019	Change from 2018
	(1,000 head)	(1,000 head)	(pounds)	(pounds)	(million pounds)	(million pounds)	(percent)
January-March	9,435	9,344	5,766	5,827	54,399	54,450	0.1
April-June	9,418	9,327	5,928	5,980	55,831	55,778	-0.1
July-September	9,383	9,317	5,752	5,824	53,969	54,261	0.5
October-December	9,359		5,703		53,376		
Annual	9,399		23,149		217,575		

¹ Includes dry cows. Excludes heifers not yet fresh.

² Excludes milk sucked by calves.

Milk Cows and Production by Month – 24 Selected States: 2018-2019

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

Month	Milk cows ¹		Milk per cow ²		Milk production ²		
	2018	2019	2018	2019	2018	2019	Change from 2018
	(1,000 head)	(1,000 head)	(pounds)	(pounds)	(million pounds)	(million pounds)	(percent)
January	8,856	8,805	1,973	2,009	17,469	17,685	1.2
February	8,855	8,805	1,817	1,834	16,086	16,148	0.4
March	8,849	8,788	2,033	2,041	17,994	17,940	-0.3
April	8,844	8,788	1,976	1,999	17,475	17,570	0.5
May	8,848	8,790	2,051	2,064	18,151	18,146	-
June	8,840	8,777	1,961	1,979	17,336	17,374	0.2
July	8,829	8,779	1,977	1,995	17,454	17,518	0.4
August	8,826	8,789	1,968	1,987	17,372	17,466	0.5
September	8,807	8,796	1,880	1,913	16,561	16,829	1.6
October	8,807		1,931		17,005		
November	8,802		1,876		16,514		
December	8,798		1,964		17,282		
Annual	8,830		23,407		206,699		

- Represents zero.

¹ Includes dry cows. Excludes heifers not yet fresh.

² Excludes milk sucked by calves.

Estimated Milk Cows and Production by Month – United States: 2018-2019

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

Month	Milk cows ¹		Milk per cow ²		Milk production ²		
	2018	2019	2018	2019	2018	2019	Change from 2018
	(1,000 head)	(1,000 head)	(pounds)	(pounds)	(million pounds)	(million pounds)	(percent)
January	9,438	9,352	1,953	1,989	18,437	18,600	0.9
February	9,436	9,350	1,799	1,816	16,973	16,981	-
March	9,430	9,330	2,014	2,022	18,989	18,869	-0.6
April	9,418	9,330	1,955	1,978	18,412	18,458	0.2
May	9,422	9,332	2,030	2,043	19,131	19,064	-0.4
June	9,414	9,319	1,943	1,959	18,288	18,256	-0.2
July	9,392	9,319	1,952	1,970	18,329	18,355	0.1
August	9,389	9,317	1,943	1,963	18,245	18,290	0.2
September	9,368	9,315	1,857	1,891	17,395	17,616	1.3
October	9,367		1,908		17,873		
November	9,358		1,854		17,348		
December	9,353		1,941		18,155		
Annual	9,399		23,149		217,575		

- Represents zero.

¹ Includes dry cows. Excludes heifers not yet fresh.

² Excludes milk sucked by calves.

Milk Cows and Production – 24 Selected States: September 2018 and 2019

[May not add due to rounding]

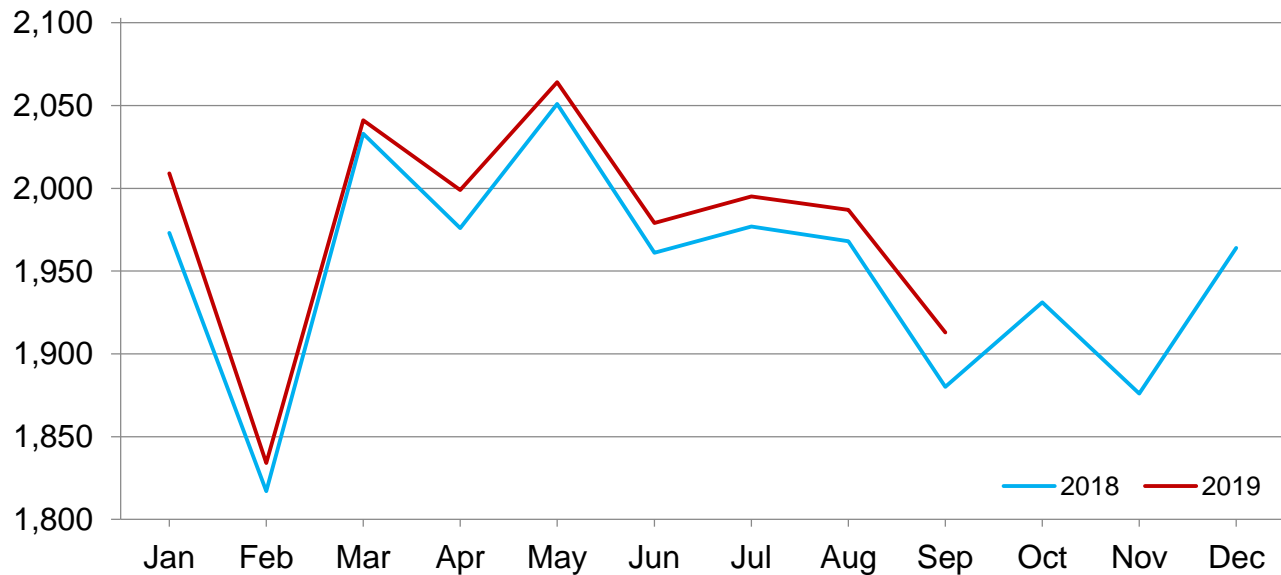
State	Milk cows ¹		Milk per cow ²		Milk production ²		Change from 2018
	2018	2019	2018	2019	2018	2019	
	(1,000 head)	(1,000 head)	(pounds)	(pounds)	(million pounds)	(million pounds)	(percent)
Arizona	206	195	1,795	1,805	370	352	-4.9
California	1,732	1,727	1,860	1,895	3,222	3,273	1.6
Colorado	178	188	2,115	2,110	376	397	5.6
Florida	118	116	1,380	1,415	163	164	0.6
Georgia	80	79	1,610	1,595	129	126	-2.3
Idaho	610	627	2,045	2,060	1,247	1,292	3.6
Illinois	88	83	1,570	1,600	138	133	-3.6
Indiana	182	175	1,770	1,800	322	315	-2.2
Iowa	220	217	1,920	1,950	422	423	0.2
Kansas	160	162	1,870	1,895	299	307	2.7
Michigan	422	428	2,115	2,165	893	927	3.8
Minnesota	451	446	1,770	1,810	798	807	1.1
New Mexico	327	327	2,005	2,045	656	669	2.0
New York	621	627	1,950	1,965	1,211	1,232	1.7
Ohio	255	251	1,680	1,725	428	433	1.2
Oregon	122	125	1,690	1,705	206	213	3.4
Pennsylvania	517	485	1,610	1,650	832	800	-3.8
South Dakota	121	126	1,840	1,865	223	235	5.4
Texas	540	570	1,925	1,995	1,040	1,137	9.3
Utah	100	96	1,920	1,915	192	184	-4.2
Vermont	126	125	1,720	1,745	217	218	0.5
Virginia	81	73	1,520	1,560	123	114	-7.3
Washington	277	281	1,995	2,005	553	563	1.8
Wisconsin	1,273	1,267	1,965	1,985	2,501	2,515	0.6
24-State Total	8,807	8,796	1,880	1,913	16,561	16,829	1.6

¹ Includes dry cows. Excludes heifers not yet fresh.

² Excludes milk sucked by calves.

Monthly Milk per Cow – 24 Selected States

Pounds



Milk Cows and Production – 24 Selected States: August 2018 and 2019

[May not add due to rounding]

	Milk cows ¹		Milk per cow ²		Milk production ²		Change from 2018
	2018	2019	2018	2019	2018	2019	
	(1,000 head)	(1,000 head)	(pounds)	(pounds)	(million pounds)	(million pounds)	(percent)
Arizona	206	195	1,835	1,860	378	363	-4.0
California	1,734	1,728	1,905	1,940	3,303	3,352	1.5
Colorado	178	187	2,210	2,200	393	411	4.6
Florida	119	116	1,515	1,560	180	181	0.6
Georgia	79	80	1,760	1,690	139	135	-2.9
Idaho	610	627	2,170	2,185	1,324	1,370	3.5
Illinois	90	83	1,675	1,670	151	139	-7.9
Indiana	184	175	1,880	1,895	346	332	-4.0
Iowa	220	217	1,995	2,030	439	441	0.5
Kansas	160	162	1,970	1,955	315	317	0.6
Michigan	423	427	2,240	2,265	948	967	2.0
Minnesota	451	447	1,860	1,895	839	847	1.0
New Mexico	328	324	2,100	2,100	689	680	-1.3
New York	622	627	2,055	2,050	1,278	1,285	0.5
Ohio	258	250	1,790	1,830	462	458	-0.9
Oregon	122	124	1,760	1,780	215	221	2.8
Pennsylvania	519	485	1,700	1,710	882	829	-6.0
South Dakota	121	124	1,915	1,940	232	241	3.9
Texas	540	567	2,035	2,030	1,099	1,151	4.7
Utah	101	96	2,000	1,995	202	192	-5.0
Vermont	127	126	1,785	1,800	227	227	-
Virginia	83	74	1,585	1,575	132	117	-11.4
Washington	277	281	2,075	2,090	575	587	2.1
Wisconsin	1,274	1,267	2,060	2,070	2,624	2,623	-
24-State Total	8,826	8,789	1,968	1,987	17,372	17,466	0.5

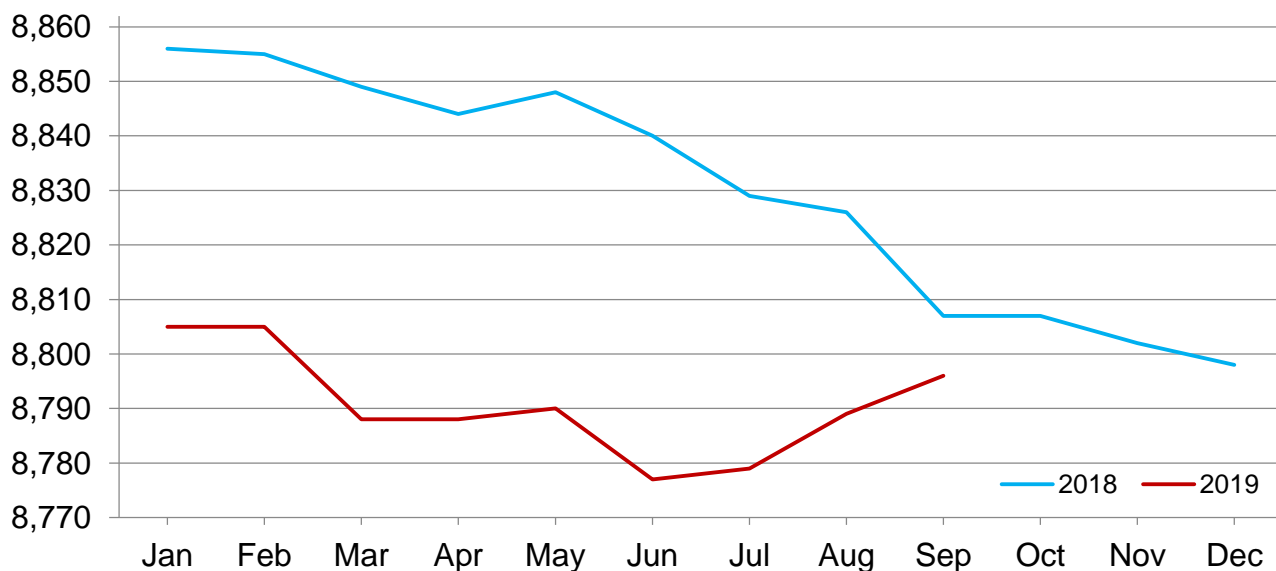
- Represents zero.

¹ Includes dry cows. Excludes heifers not yet fresh.

² Excludes milk sucked by calves.

Monthly Milk Cows – 24 Selected States

Thousand head



Milk Cows and Production – States and United States: Revised April - June 2018 and 2019

[May not add due to rounding]

State	April - June milk cows ¹		April - June milk production ²		Change from 2018
	2018	2019	2018	2019	
	(1,000 head)	(1,000 head)	(million pounds)	(million pounds)	(percent)
Alabama	5.5	5.0	21.0	18.0	-14.3
Alaska	0.3	0.2	0.7	0.5	-28.6
Arizona	208.0	197.0	1,307.0	1,237.0	-5.4
Arkansas	6.0	5.0	21.0	18.0	-14.3
California	1,735.0	1,728.0	10,289.0	10,463.0	1.7
Colorado	176.0	184.0	1,152.0	1,206.0	4.7
Connecticut	19.5	19.5	111.0	108.0	-2.7
Delaware	4.9	4.2	25.1	19.2	-23.5
Florida	121.0	115.0	641.0	618.0	-3.6
Georgia	83.0	83.0	454.0	457.0	0.7
Hawaii	2.1	0.8	10.7	0.8	-92.5
Idaho	609.0	619.0	3,837.0	3,933.0	2.5
Illinois	93.0	84.0	503.0	454.0	-9.7
Indiana	184.0	178.0	1,078.0	1,045.0	-3.1
Iowa	220.0	217.0	1,330.0	1,325.0	-0.4
Kansas	158.0	162.0	944.0	961.0	1.8
Kentucky	56.0	51.0	272.0	252.0	-7.4
Louisiana	11.5	10.5	43.0	37.0	-14.0
Maine	30.0	30.0	160.0	161.0	0.6
Maryland	46.0	43.0	245.0	217.0	-11.4
Massachusetts	11.5	10.5	53.0	49.0	-7.5
Michigan	423.0	425.0	2,869.0	2,918.0	1.7
Minnesota	454.0	448.0	2,510.0	2,527.0	0.7
Mississippi	9.0	8.5	36.0	34.0	-5.6
Missouri	83.0	79.0	335.0	303.0	-9.6
Montana	12.5	11.5	70.0	65.0	-7.1
Nebraska	60.0	58.0	367.0	354.0	-3.5
Nevada	32.0	33.0	186.0	190.0	2.2
New Hampshire	12.5	11.5	65.0	62.0	-4.6
New Jersey	6.0	4.8	29.0	26.0	-10.3
New Mexico	333.0	322.0	2,157.0	2,102.0	-2.5
New York	624.0	627.0	3,823.0	3,869.0	1.2
North Carolina	44.0	43.0	245.0	236.0	-3.7
North Dakota	15.5	14.5	85.0	83.0	-2.4
Ohio	261.0	248.0	1,445.0	1,374.0	-4.9
Oklahoma	40.0	42.0	185.0	192.0	3.8
Oregon	121.0	122.0	642.0	655.0	2.0
Pennsylvania	523.0	493.0	2,780.0	2,589.0	-6.9
Rhode Island	0.7	0.7	3.0	2.8	-6.7
South Carolina	14.5	12.0	66.0	55.0	-16.7
South Dakota	121.0	123.0	687.0	693.0	0.9
Tennessee	38.0	32.0	170.0	145.0	-14.7
Texas	535.0	564.0	3,315.0	3,511.0	5.9
Utah	100.0	98.0	596.0	576.0	-3.4
Vermont	127.0	126.0	684.0	687.0	0.4
Virginia	84.0	75.0	429.0	384.0	-10.5
Washington	277.0	278.0	1,712.0	1,722.0	0.6
West Virginia	7.0	6.0	29.0	23.0	-20.7
Wisconsin	1,274.0	1,269.0	7,778.0	7,784.0	0.1
Wyoming	6.0	6.0	35.8	36.5	2.0
United States	9,418.0	9,327.0	55,831.0	55,778.0	-0.1

¹ Includes dry cows. Excludes heifers not yet fresh.

² Excludes milk sucked by calves.

Milk Cows and Production – States and United States: Preliminary July - September 2018 and 2019

[May not add due to rounding]

State	July - September milk cows ¹		July - September milk production ²		
	2018	2019	2018	2019	Change from 2018
	(1,000 head)	(1,000 head)	(million pounds)	(million pounds)	(percent)
Alabama	5.5	4.5	15.0	13.0	-13.3
Alaska	0.3	0.2	0.8	0.6	-25.0
Arizona	206.0	195.0	1,138.0	1,084.0	-4.7
Arkansas	5.5	5.0	16.0	14.0	-12.5
California	1,733.0	1,728.0	9,820.0	10,003.0	1.9
Colorado	178.0	187.0	1,161.0	1,220.0	5.1
Connecticut	19.5	19.0	104.0	104.0	-
Delaware	4.9	4.0	21.1	16.2	-23.2
Florida	119.0	116.0	531.0	537.0	1.1
Georgia	80.0	80.0	411.0	404.0	-1.7
Hawaii	2.0	0.8	7.8	0.6	-92.3
Idaho	610.0	626.0	3,898.0	4,031.0	3.4
Illinois	90.0	83.0	444.0	412.0	-7.2
Indiana	183.0	175.0	1,016.0	978.0	-3.7
Iowa	220.0	217.0	1,300.0	1,294.0	-0.5
Kansas	160.0	162.0	927.0	943.0	1.7
Kentucky	53.0	49.0	227.0	211.0	-7.0
Louisiana	11.0	10.0	31.0	27.0	-12.9
Maine	30.0	29.0	156.0	158.0	1.3
Maryland	45.0	42.0	219.0	200.0	-8.7
Massachusetts	11.0	10.0	51.0	47.0	-7.8
Michigan	423.0	427.0	2,789.0	2,852.0	2.3
Minnesota	451.0	447.0	2,478.0	2,501.0	0.9
Mississippi	8.5	8.0	28.0	26.0	-7.1
Missouri	82.0	77.0	276.0	254.0	-8.0
Montana	12.0	11.5	69.0	65.0	-5.8
Nebraska	59.0	58.0	353.0	345.0	-2.3
Nevada	32.0	33.0	184.0	188.0	2.2
New Hampshire	12.0	11.0	61.0	59.0	-3.3
New Jersey	5.5	4.7	26.0	23.0	-11.5
New Mexico	328.0	325.0	2,047.0	2,045.0	-0.1
New York	622.0	627.0	3,773.0	3,802.0	0.8
North Carolina	43.0	41.0	219.0	213.0	-2.7
North Dakota	15.5	14.5	85.0	83.0	-2.4
Ohio	258.0	250.0	1,357.0	1,345.0	-0.9
Oklahoma	40.0	41.0	170.0	170.0	-
Oregon	122.0	124.0	638.0	658.0	3.1
Pennsylvania	519.0	485.0	2,614.0	2,461.0	-5.9
Rhode Island	0.7	0.7	3.0	2.7	-10.0
South Carolina	13.5	11.0	53.0	45.0	-15.1
South Dakota	121.0	124.0	685.0	712.0	3.9
Tennessee	36.0	31.0	143.0	124.0	-13.3
Texas	539.0	567.0	3,242.0	3,455.0	6.6
Utah	101.0	96.0	596.0	571.0	-4.2
Vermont	127.0	126.0	669.0	673.0	0.6
Virginia	82.0	74.0	389.0	349.0	-10.3
Washington	277.0	281.0	1,708.0	1,746.0	2.2
West Virginia	7.0	6.0	27.0	22.0	-18.5
Wisconsin	1,274.0	1,267.0	7,756.0	7,737.0	-0.2
Wyoming	6.0	6.0	35.8	37.0	3.4
United States	9,383.0	9,317.0	53,969.0	54,261.0	0.5

- Represents zero.

¹ Includes dry cows. Excludes heifers not yet fresh.

² Excludes milk sucked by calves.

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 54.3 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	37	3	124	14	6
All milk cows	0.1	0.2	9	0	28	14	5

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.

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Holly Brenize – Sheep and Goats	(202) 720-0585
Donnie Fike – Dairy Products	(202) 720-4448
Heidi Lanouette – Cattle, Cattle on Feed	(202) 720-3040
Mike Miller – Milk Production and Milk Cows	(202) 720-3278
Seth Riggins – Hogs and Pigs	(202) 720-3106

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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.

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