

# Milk Production



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## February Milk Production

Milk production in the 21 major States during February totaled 9.79 billion pounds, 1 percent less than production in these same States in February 1993. January revised production at 10.6 billion pounds was 1 percent below January 1993.

Production per cow in the 21 major States averaged 1,221 pounds for February, 12 pounds more than February 1993.

The number of cows on farms in the 21 major States was 8.02 million head, 175,000 head less than February 1993 and 24,000 less than January 1994.

During the October-December period, the 21 major States produced 30.8 billion pounds of milk, 84.2 percent of the U.S. production. If producers in the remaining 29 States not surveyed monthly followed the same pattern as the 21 States, the U.S. production would be 11.6 billion pounds for February 1994.

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Milk Cows and Production: By Month 21 Selected States, 1993-94

Month	Milk Cows <u>1/</u>		Milk per Cow <u>2/</u>		Milk Production <u>2/</u>		
	1993	1994	1993	1994	1993	1994	1994 as % of 1993
	----- 1,000 -----		----- Pounds -----		Million Pounds		Percent
Jan	8,219	8,042	1,305	1,323	10,728	10,637	99
Feb	8,193	8,018	1,209	1,221	9,908	9,789	99
Mar	8,173		1,353		11,060		
Apr	8,148		1,341		10,927		
May	8,139		1,402		11,410		
Jun	8,130		1,346		10,940		
Jul	8,110		1,346		10,913		
Aug	8,098		1,306		10,573		
Sep	8,090		1,253		10,138		
Oct	8,069		1,280		10,331		
Nov	8,065		1,239		9,994		
Dec	8,054		1,299		10,461		
Annual	8,124		15,680		127,383		

1/ Includes dry cows. Excludes heifers not yet fresh.  
2/ Excludes milk sucked by calves.

Milk Cows and Production: By State, February 1993-94

State	Milk Cows <u>1/</u>		Milk per Cow <u>2/</u>		Milk Production <u>2/</u>		1994 as % of 1993
	1993	1994	1993	1994	1993	1994	
	----- 1,000 -----		----- Pounds -----		Million Pounds		Percent
CA	1,172	1,195	1,440	1,494	1,688	1,785	106
FL	179	175	1,265	1,270	226	222	98
ID	184	195	1,250	1,280	230	250	109
IL	180	175	1,180	1,160	212	203	96
IN	143	145	1,230	1,210	176	175	99
IA	298	287	1,130	1,075	337	309	92
KY	183	173	905	915	166	158	95
MD	100	95	1,140	1,270	114	121	106
MI	340	339	1,250	1,235	425	419	99
MN	660	635	1,200	1,160	792	737	93
MO	223	218	1,010	980	225	214	95
NY	748	744	1,165	1,170	871	870	100
NC	96	91	1,310	1,320	126	120	95
OH	310	302	1,175	1,200	364	362	99
PA	651	647	1,220	1,220	794	789	99
TN	190	173	870	980	165	170	103
TX	380	390	1,245	1,295	473	505	107
VT	164	161	1,175	1,180	193	190	98
VA	133	130	1,235	1,200	164	156	95
WA	252	256	1,490	1,505	375	385	103
WI	1,607	1,492	1,115	1,105	1,792	1,649	92
21 State:							
Total	8,193	8,018	1,209	1,221	9,908	9,789	99

1/ Includes dry cows. Excludes heifers not yet fresh.

2/ Excludes milk sucked by calves.

Milk Cows and Production: by Quarter, United States, 1993-94

Month	Milk Cows <u>1/</u>		Milk per Cow <u>2/</u>		Milk Production <u>2/</u>		1994 as % of 1993
	1993	1994	1993	1994	1993	1994	
	---- 1,000 ----		---- Pounds ----		Million Pounds		Percent
Jan-Mar	9,773		3,848		37,608		
Apr-Jun	9,727		4,052		39,411		
Jul-Sep	9,675		3,862		37,364		
Oct-Dec	9,644		3,792		36,571		
Annual	9,705		15,554		150,954		

1/ Includes dry cows. Excludes heifers not yet fresh.

2/ Excludes milk sucked by calves.

Milk Cows and Production: By States, January 1993-94 1/

State	Milk Cows <u>2/</u>		Milk per Cow <u>3/</u>		Milk Production <u>3/</u>		1994 as % of 1993
	1993	1994	1993	1994	1993	1994	
	---- 1,000 ----		---- Pounds ----		Million Pounds		Percent
CA	1,171	1,193	1,555	1,665	1,821	1,986	109
FL	180	175	1,340	1,340	241	235	98
ID	184	195	1,390	1,430	256	279	109
IL	180	175	1,270	1,210	229	212	93
IN	143	145	1,340	1,310	192	190	99
IA	300	290	1,150	1,125	345	326	94
KY	184	173	1,005	990	185	171	92
MD	100	95	1,240	1,240	124	118	95
MI	340	339	1,350	1,345	459	456	99
MN	660	635	1,295	1,265	855	803	94
MO	225	220	1,085	1,025	244	226	93
NY	747	750	1,290	1,265	964	949	98
NC	96	91	1,410	1,420	135	129	96
OH	312	302	1,265	1,285	395	388	98
PA	656	650	1,290	1,320	846	858	101
TN	190	175	900	990	171	173	101
TX	380	390	1,330	1,370	505	534	106
VT	166	161	1,285	1,290	213	208	98
VA	134	130	1,345	1,285	180	167	93
WA	251	258	1,625	1,630	408	421	103
WI	1,620	1,500	1,210	1,205	1,960	1,808	92
21 State:							
Total	8,219	8,042	1,305	1,323	10,728	10,637	99

1/ 1993 and 1994 revised.

2/ Includes dry cows. Excludes heifers not yet fresh.

3/ Excludes milk sucked by calves.

**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. About 20,000 producers are sampled in January and data are collected from about 10,000 respondents. There are about 7,300 respondents in each of the remaining quarters. Generally, all larger producers and a sample of smaller 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, January 1, February 1, etc. Toward the end of the data collection period, statisticians review mail returns to ensure that each size group is adequately represented. If additional reports are needed in some size groups, statisticians obtain these by telephone.

**Estimation Procedures:** Each State statistician prepares their estimate by plotting survey estimates and averages on time series charts. The individual State estimates are reviewed by the Agricultural Statistics Board for reasonableness.

**Revision Policy:** Milk production, rate per cow, and number of cows are subject to revision the following month for monthly States or the following quarter for the quarterly States. Normally, Federal Market Order sales are the main reason for revisions, however, not all orders have data available in time for this revision. A second revision is made in February each year based on additional administrative data. In the event that some additional changes are necessary, a third revision is made in February the following year. Estimates are again reviewed after data for the five-year Census of Agriculture, conducted by the Department of Commerce, are available.

**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 milk cow inventory estimates over the past 10 quarters is 0.6 percent. This means that chances are 2 out of 3 that the final estimate will not be above or below the current estimate of 9.66 million head by more than 0.6 percent, or about 58,000 head. Chances are 9 out of 10 that the difference will not exceed 1.1 percent, or about 106,000 head (the 90 percent confidence level).

Reliability of October-December Milk Estimates 1/

Item	Root Mean Square Error	90% Confidence Level	Head (000)	Difference Between First and Final Estimates <u>1/</u>			Number of Quarters	
				Average	Smallest	Largest	First Above Final	First Below Final
	Percent			Mil Lbs.			Number	
Milk Production	0.7	1.2	439	168	7	565	8	2
				----- 1,000 Head -----				
All Milk Cows	0.6	1.1	106	46	4	126	10	0

1/ Based on records for the past 10 October-December quarters.



