

# Milk Production



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Statistics  
Service

United States  
Department of  
Agriculture

Washington, D.C.

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Data pertain to February. This release also contains corrections to the  
annual data published February 16, 1993.

## February Milk Production

Milk production in the 21 major States during February totaled 10.0 billion pounds, 2 percent less than production in these same States in February 1992 (February 1992 had 29 days). January revised production at 10.8 billion pounds was slightly above January 1992.

Production per cow in the 21 major States averaged 1,218 pounds for February, 20 pounds less than February 1992.

The number of cows on farms in the 21 major States was 8.20 million head, 74,000 head less than February 1992 and 11,000 less than January 1993.

During the October-December period, the 21 major States produced 31.4 billion pounds of milk, 84.4 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 11.8 billion pounds for February 1993.

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8:00 a.m. to 4:30 p.m. ET.

Milk Cows and Production: By Quarter, United States, 1992-93

Month	Milk Cows <u>1/</u>		Milk per Cow <u>2/</u>		Milk Production <u>2/</u>		
	1992	1993	1992	1993	1992	1993	1993 as % of 1992
	---- 1,000 ----		---- Pounds ----		Million Pounds		Percent
Jan-Mar	9,863		3,852		37,989		
Apr-Jun	9,841		3,971		39,077		
Jul-Sep	9,826		3,818		37,515		
Oct-Dec	9,827		3,782		37,166		
Annual	9,839		15,423		151,747		

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

2/ Excludes milk sucked by calves.

Milk Cows and Production: By State, January, 1992-93 1/

State	Milk Cows <u>2/</u>		Milk per Cow <u>3/</u>		Milk Production <u>3/</u>		
	1992	1993	1992	1993	1992	1993	1993 as % of 1992
	---- 1,000 ----		---- Pounds ----		Million Pounds		Percent
CA	1,160	1,161	1,540	1,570	1,786	1,823	102
FL	180	180	1,345	1,340	242	241	100
ID	177	184	1,360	1,390	241	256	106
IL	187	180	1,250	1,270	234	229	98
IN	146	143	1,320	1,300	193	186	96
IA	302	305	1,160	1,190	350	363	104
KY	187	184	980	1,005	183	185	101
MD	100	100	1,250	1,210	125	121	97
MI	338	340	1,330	1,350	450	459	102
MN	670	660	1,275	1,300	854	858	100
MO	224	225	1,105	1,080	248	243	98
NY	750	747	1,310	1,295	983	967	98
NC	98	96	1,375	1,410	135	135	100
OH	329	313	1,200	1,290	395	404	102
PA	669	656	1,310	1,290	876	846	97
TN	195	190	890	900	174	171	98
TX	375	380	1,280	1,330	480	505	105
VT	162	166	1,315	1,275	213	212	100
VA	140	134	1,295	1,345	181	180	99
WA	241	251	1,605	1,625	387	408	105
WI	1,668	1,620	1,190	1,215	1,985	1,968	99
21 State:							
Total	8,298	8,215	1,291	1,310	10,715	10,760	100

1/ 1992 and 1993 revised.

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

3/ Excludes milk sucked by calves.

Milk Cows and Production: By Month, 21 Selected States, 1992-93

Month	Milk Cows <u>1/</u>		Milk per Cow <u>2/</u>		Milk Production <u>2/</u>		1993 as % of 1992
	1992	1993	1992	1993	1992	1993	
	--- 1,000	-----	Pounds		Million Pounds		Percent
Jan	8,298	8,215	1,291	1,310	10,715	10,760	100
Feb	8,278	8,204	1,238	1,218	10,251	9,996	98
Mar	8,257		1,344		11,096		
Apr	8,255		1,314		10,850		
May	8,250		1,367		11,280		
Jun	8,250		1,321		10,897		
Jul	8,247		1,322		10,900		
Aug	8,243		1,295		10,673		
Sep	8,237		1,246		10,263		
Oct	8,238		1,278		10,532		
Nov	8,235		1,237		10,184		
Dec	8,247		1,292		10,659		
Annual	8,253		15,546		128,300		

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

2/ Excludes milk sucked by calves.

Milk Cows and Production: By State, February 1992-93

State	Milk Cows <u>1/</u>		Milk per Cow <u>2/</u>		Milk Production <u>2/</u>		
	1992	1993	1992	1993	1992	1993	1993 as % of 1992
	---- 1,000 ----		-- Pounds ----		Million Pounds		Percent
CA	1,160	1,161	1,470	1,460	1,705	1,695	99
FL	182	179	1,260	1,265	229	226	99
ID	176	184	1,290	1,240	227	228	100
IL	187	180	1,160	1,180	217	212	98
IN	144	143	1,280	1,170	184	167	91
IA	302	305	1,170	1,160	353	354	100
KY	183	184	955	925	175	170	97
MD	99	101	1,200	1,140	119	115	97
MI	338	340	1,270	1,250	429	425	99
MN	670	660	1,220	1,200	817	792	97
MO	225	225	1,050	1,035	236	233	99
NY	745	748	1,245	1,180	928	883	95
NC	98	96	1,315	1,310	129	126	98
OH	330	313	1,140	1,215	376	380	101
PA	665	651	1,290	1,220	858	794	93
TN	195	190	880	870	172	165	96
TX	377	380	1,225	1,250	462	475	103
VT	163	166	1,240	1,200	202	199	99
VA	139	133	1,235	1,240	172	165	96
WA	241	252	1,535	1,495	370	377	102
WI	1,659	1,613	1,140	1,125	1,891	1,815	96
21 State:							
Total	8,278	8,204	1,238	1,218	10,251	9,996	98

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

2/ Excludes milk sucked by calves.

Milk Cows and Production: United States, 1985-92

Year	Milk Cows <u>1/</u>	Production per Cow:		Milk Production
		<u>2/</u>		<u>2/</u>
		Milk		Total
	1,000	Pounds		Million Pounds
1985	10,981	13,024		143,012
1986	10,773	13,285		143,124
1987	10,327	13,819		142,709
1988	10,262	14,145		145,152
1989	10,126	14,245		144,239
1990 <u>3/</u>	10,127	14,645		148,313
1991 <u>3/</u>	9,992	14,860		148,477
1992 <u>3/</u>	9,839	15,423		151,747

1/ Average number during year, excluding heifers not yet fresh.

2/ Excludes milk sucked by calves.

3/ Revised.

Milk Cows and Production: By Month and Quarter, United States, 1991-92

Month	Milk Cows <u>1/</u>		Milk per Cow <u>2/</u> :		Milk Production <u>2/</u>		1992 as % of 1991
	1991	1992	1991	1992	1991	1992	
	1,000		Pounds		Million Pounds		Percent
Jan	8,510	8,298	1,250	1,291	10,639	10,715	101
Feb	8,485	8,278	1,169	1,238	9,915	10,251	103
Mar	8,459	8,257	1,308	1,344	11,067	11,096	100
Jan-Mar	10,100	9,863	3,702	3,852	37,389	37,989	102
Apr	8,416	8,255	1,296	1,314	10,906	10,850	99
May	8,395	8,250	1,337	1,367	11,223	11,280	101
Jun	8,371	8,250	1,261	1,321	10,555	10,897	103
Apr-Jun	10,000	9,841	3,859	3,971	38,586	39,077	101
Jul	8,351	8,247	1,253	1,322	10,465	10,900	104
Aug	8,357	8,243	1,238	1,295	10,349	10,673	103
Sep	8,350	8,237	1,189	1,246	9,925	10,263	103
Jul-Sep	9,944	9,826	3,643	3,818	36,232	37,515	104
Oct	8,346	8,238	1,226	1,278	10,230	10,532	103
Nov	8,328	8,235	1,194	1,237	9,944	10,184	102
Dec	8,322	8,247	1,256	1,292	10,453	10,659	102
Oct-Dec <u>3/</u>	9,923	9,827	3,655	3,782	36,270	37,166	102
Annual <u>3/</u>	9,992	9,839	14,860	15,423	148,477	151,747	102

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

2/ Excludes milk sucked by calves. 3/ Revised.

Milk Cows and Milk Production: Number and Total Produced  
by Quarter, State, and United States, 1991

State	Milk Cows <sup>1/</sup>				Milk Production <sup>2/</sup>			
	Jan-Mar	Apr-Jun	Jul-Sep	Oct-Dec	Jan-Mar	Apr-Jun	Jul-Sep	Oct-Dec
	1,000 Head				Million Pounds			
AL	42	41	40	42	148	137	107	129
AK	1.1	1.0	0.9	0.8	3.65	3.71	3.11	2.83
AZ	96	94	93	96	445	442	385	441
AR	67	67	67	66	204	208	185	186
CA	1,152	1,155	1,157	1,158	5,240	5,468	5,413	5,286
CO	77	78	77	77	325	345	333	332
CT	33	33	33	33	133	134	126	130
DE	9.1	9.2	9.2	9.4	34.9	33.4	29.4	32.3
FL	184	180	177	177	717	663	528	600
GA	112	108	104	104	412	372	302	361
HI	11.0	10.9	10.8	10.7	35.7	37.8	34.8	32.7
ID	179	177	178	178	686	744	775	714
IL	194	192	190	188	709	725	691	686
IN	151	149	146	145	576	606	549	554
IA	302	303	304	303	1,064	1,048	1,020	1,019
KS	98	98	97	96	315	315	295	305
KY	199	196	193	191	569	580	517	524
LA	81	80	79	79	265	245	200	224
ME	41	42	42	41	153	159	156	153
MD <sup>3/</sup>	106	102	100	103	361	365	339	354
MA	31	31	30	30	120	120	112	113
MI	343	343	340	339	1,305	1,343	1,327	1,281
MN	690	683	680	677	2,576	2,587	2,271	2,338
MS	63	62	60	60	207	197	159	175
MO	229	228	225	221	725	767	678	695
MT	24	24	24	24	81	85	83	81
NE	102	100	99	99	319	325	320	316
NV	20.0	19.0	19.0	19.0	80.0	88.0	87.0	86.0
NH	20	20	20	21	79	80	77	82
NJ	25	25	25	25	91	92	85	86
NM	93	98	101	101	422	493	500	502
NY <sup>3/</sup>	767	752	751	755	2,777	2,902	2,735	2,765
NC	100	99	97	98	409	393	347	378
ND	85	84	81	79	264	275	255	241
OH	339	337	336	334	1,180	1,236	1,151	1,128
OK	99	98	99	99	307	308	304	304
OR	100	100	100	100	391	430	429	409
PA	679	662	664	672	2,529	2,597	2,444	2,536
RI	2.3	2.3	2.2	2.2	8.9	9.1	8.2	8.2
SC	34	32	31	33	114	102	87	102
SD	137	137	136	134	416	444	409	405
TN	194	193	194	196	536	575	539	535
TX	387	383	377	374	1,453	1,442	1,211	1,312
UT	79	80	80	78	298	325	327	312
VT	164	163	164	164	601	621	586	600
VA	140	139	139	140	529	522	482	513
WA	237	236	237	236	1,069	1,137	1,141	1,112
WV	24	23	23	23	68	69	67	66
WI	1,747	1,722	1,703	1,683	6,010	6,363	5,995	5,697
WY	9.0	8.6	8.6	8.5	27.9	27.5	27.5	26.4
US <sup>4/</sup>	10,100	10,000	9,944	9,923	37,389	38,586	36,232	36,270

<sup>1/</sup> Quarterly average includes dry cows, excludes heifers not yet fresh.  
<sup>2/</sup> Excludes milk sucked by calves. <sup>3/</sup> Milk production for Oct-Dec is revised. <sup>4/</sup> Will not add due to rounding.

**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 9.84 million head by more than 0.6 percent, or about 59,000 head. Chances are 9 out of 10 that the difference will not exceed 1.1 percent, or about 108,000 head (the 90 percent confidence level).

Reliability of October-December Milk Estimates 1/

Item	Root Mean Square Error	90% Confidence Level	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	448	-132	0	-565	7	2
			----- 1,000 Head -----					
All Milk Cows	0.6	1.1	108	-45	0	-126	9	0

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

The next "Milk Production" report will be released at 3:00 p.m. ET on April 15, 1993.



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