

Milk Production



National
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Department of
Agriculture

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December Milk Production

Milk production in the 21 major States during December totaled 10.4 billion pounds, 2 percent less than production in these same States in December 1992. November revised production at 10.0 billion pounds was 2 percent below November 1992.

Production per cow in the 21 major States averaged 1,292 pounds for December, unchanged from December 1992.

The number of cows on farms in the 21 major States was 8.06 million head, 190,000 head less than December 1992 and 22,000 less than November 1993.

During the October-December period, the 21 major States produced 30.8 billion pounds of milk, 84.0 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 12.3 billion pounds for October, 11.9 billion pounds for November, and 12.4 billion pounds for December.

October-December Milk Production Down 1 Percent

The quarterly production of milk for the U.S. was 36.6 billion pounds, 1 percent below the October-December period in 1992. The average number of milk cows in the U.S. during the October-December quarter was 9.66 million head, 165,000 less than the same period a year earlier.

Grain and Other Concentrates Fed

Grain and other concentrates fed to milk on January 1, 1994, averaged 18.5 pounds per cow, 0.1 pound more than January 1, 1993.

Value of Grain and Other Concentrates

The value of grain and other concentrates fed to cows on January 1, averaged \$8.18 per hundredweight, \$0.51 more than January 1, 1993.

For information call Daniel Buckner at (202) 720-4448. Office hours are 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>		1993 as % of 1992
	1992	1993	1992	1993	1992	1993	
	---- 1,000 ----		---- Pounds ----		Million Pounds		Percent
Jan-Mar	9,863	9,777	3,852	3,862	37,989	37,763	99
Apr-Jun	9,841	9,739	3,971	4,068	39,077	39,614	101
Jul-Sep	9,826	9,705	3,818	3,861	37,515	37,468	100
Oct-Dec	9,827	9,662	3,782	3,789	37,166	36,613	99
Annual	9,839	9,721	15,423	15,580	151,747	151,458	100

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

2/ Excludes milk sucked by calves.

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

State	Milk Cows <u>2/</u>		Milk Per Cow <u>3/</u>		Milk Production <u>3/</u>		1993 as % of 1992
	1992	1993	1992	1993	1992	1993	
	---- 1,000 ----		---- Pounds ----		Million Pounds		Percent
CA	1,160	1,181	1,565	1,600	1,815	1,890	104
FL	181	177	1,105	1,090	200	193	97
ID	185	193	1,380	1,400	255	270	106
IL	182	176	1,190	1,130	217	199	92
IN	143	145	1,270	1,220	182	177	97
IA	305	298	1,180	1,110	360	331	92
KY	186	176	935	920	174	162	93
MD	100	96	1,180	1,200	118	115	97
MI	340	339	1,260	1,250	428	424	99
MN	655	645	1,175	1,140	770	735	95
MO	226	220	1,035	960	234	211	90
NY	753	756	1,175	1,175	885	888	100
NC	96	92	1,310	1,310	126	121	96
OH	315	304	1,150	1,240	362	377	104
PA	655	650	1,260	1,250	825	813	99
TN	190	180	940	980	179	176	98
TX	378	386	1,195	1,210	452	467	103
VT	164	165	1,195	1,180	196	195	99
VA	135	131	1,245	1,235	168	162	96
WA	253	257	1,555	1,550	393	398	101
WI	1,633	1,512	1,130	1,120	1,845	1,693	92
21 State:							
Total	8,235	8,079	1,237	1,237	10,184	9,997	98

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	8,196	1,238	1,216	10,251	9,965	97
Mar	8,257	8,178	1,344	1,356	11,096	11,087	100
Apr	8,255	8,153	1,314	1,344	10,850	10,956	101
May	8,250	8,148	1,367	1,404	11,280	11,443	101
Jun	8,250	8,144	1,321	1,354	10,897	11,024	101
Jul	8,247	8,134	1,322	1,346	10,900	10,948	100
Aug	8,243	8,120	1,295	1,302	10,673	10,572	99
Sep	8,237	8,110	1,246	1,253	10,263	10,160	99
Oct	8,238	8,093	1,278	1,280	10,532	10,358	98
Nov	8,235	8,079	1,237	1,237	10,184	9,997	98
Dec	8,247	8,057	1,292	1,292	10,659	10,408	98
Annual	8,253	8,136	15,546	15,694	128,300	127,678	100

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

2/ Excludes milk sucked by calves.

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

State	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
CA	1,161	1,183	1,605	1,630	1,863	1,928	103
FL	180	177	1,270	1,260	229	223	97
ID	185	193	1,410	1,440	261	278	107
IL	182	175	1,240	1,170	226	205	91
IN	143	145	1,310	1,280	187	186	99
IA	305	295	1,190	1,130	363	333	92
KY	186	175	995	980	185	172	93
MD	100	94	1,230	1,240	123	117	95
MI	340	339	1,320	1,310	449	444	99
MN	660	640	1,255	1,225	828	784	95
MO	226	218	1,080	975	244	213	87
NY	755	755	1,255	1,240	948	936	99
NC	96	91	1,375	1,390	132	126	95
OH	315	304	1,220	1,250	384	380	99
PA	659	654	1,290	1,295	850	847	100
TN	190	178	940	1,000	179	178	99
TX	380	386	1,280	1,310	486	506	104
VT	167	165	1,245	1,255	208	207	100
VA	135	130	1,310	1,290	177	168	95
WA	254	257	1,605	1,600	408	411	101
WI	1,628	1,503	1,185	1,175	1,929	1,766	92
21 State:							
Total	8,247	8,057	1,292	1,292	10,659	10,408	98

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

2/ Excludes milk sucked by calves.

Milk Cows and Production: By State and United States
 Revised July-September 1992-93

State	Jul-Sep Milk Cows <u>1/</u>		Jul-Sep Milk Production <u>2/</u>		1993
	1992	1993	1992	1993	as % of 1992
	---- 1,000 ----		-- Million Pounds --		Percent
AL	40	38	104	110	106
AK	0.7	0.7	3.28	3.12	95
AZ	99	104	394	434	110
AR	65	62	190	186	98
CA	1,157	1,174	5,550	5,839	105
CO	79	81	357	373	104
CT	34	34	132	127	96
DE	9.5	9.8	35.4	36.3	103
FL	180	179	551	560	102
GA	102	101	330	335	102
HI	11.1	11.0	35.0	34.5	99
ID	186	192	837	851	102
IL	184	176	670	659	98
IN	145	145	573	562	98
IA	306	304	1,066	1,062	100
KS	88	80	295	260	88
KY	183	178	520	526	101
LA	79	79	210	200	95
ME	40	41	165	167	101
MD	99	98	346	343	99
MA	30	30	119	119	100
MI	340	339	1,370	1,369	100
MN	657	647	2,374	2,323	98
MS	59	58	166	162	98
MO	229	226	723	704	97
MT	23	22	82	79	96
NE	96	94	307	315	103
NV	20.0	20.0	89.0	89.0	100
NH	21	20	80	78	98
NJ	25	25	91	95	104
NM	113	139	557	669	120
NY	751	750	2,875	2,831	98
NC	96	94	348	340	98
ND	77	70	246	235	96
OH	323	309	1,166	1,151	99
OK	95	98	299	309	103
OR	102	100	442	430	97
PA	648	650	2,521	2,510	100
RI	2.3	2.2	8	8	100
SC	29	28	84	84	100
SD	130	125	420	418	100
TN	189	183	541	522	96
TX	375	386	1,292	1,386	107
UT	83	81	344	338	98
VT	164	163	621	614	99
VA	136	131	485	474	98
WA	252	260	1,237	1,277	103
WV	23	23	69	68	99
WI	1,641	1,538	6,170	5,777	94
WY	7.7	7.3	25.8	25.8	100
US <u>3/</u>	9,826	9,705	37,515	37,468	100

1/ Includes dry cows, excludes heifers not yet fresh.

2/ Excludes milk sucked by calves.

3/ Milk cows will not add due to rounding.

Milk Cows and Production: By State and United States
Preliminary October-December 1992-93

State	Oct-Dec Milk Cows <u>1/</u>		Oct-Dec Milk Production <u>2/</u>		1993 as % of 1992
	1992	1993	1992	1993	
	---- 1,000 ----		-- Million Pounds --		Percent
AL	40	38	128	125	98
AK	0.7	0.7	2.89	2.87	99
AZ	98	105	453	491	108
AR	64	62	188	183	97
CA	1,160	1,181	5,556	5,777	104
CO	80	80	357	356	100
CT	35	34	132	127	96
DE	9.8	9.7	36.2	33.8	93
FL	181	177	621	605	97
GA	102	102	378	379	100
HI	11.1	10.8	32.7	31.8	97
ID	185	193	784	830	106
IL	182	175	666	612	92
IN	143	145	561	546	97
IA	305	298	1,084	1,007	93
KS	86	76	295	255	86
KY	185	176	540	506	94
LA	80	79	230	221	96
ME	40	40	158	162	103
MD	100	95	359	349	97
MA	30	30	117	115	98
MI	340	339	1,324	1,314	99
MN	657	643	2,377	2,264	95
MS	60	58	182	171	94
MO	227	219	721	644	89
MT	23	22	80	76	95
NE	97	93	306	312	102
NV	20.0	20.0	87.0	88.0	101
NH	20	20	80	77	96
NJ	25	25	95	92	97
NM	120	147	558	690	124
NY	754	755	2,767	2,743	99
NC	96	92	384	367	96
ND	76	69	236	214	91
OH	316	305	1,128	1,133	100
OK	95	100	309	320	104
OR	102	100	420	415	99
PA	655	652	2,514	2,498	99
RI	2.3	2.2	7.4	7.9	107
SC	29	28	99	94	95
SD	128	124	390	387	99
TN	190	180	539	530	98
TX	378	386	1,393	1,448	104
UT	82	80	339	330	97
VT	165	165	609	604	99
VA	135	131	516	494	96
WA	253	257	1,210	1,228	101
WV	23	23	70	70	100
WI	1,633	1,513	5,722	5,264	92
WY	7.6	7.1	24.5	24.1	98
US <u>3/</u>	9,827	9,662	37,166	36,613	99

1/ Includes dry cows, excludes heifers not yet fresh.

2/ Excludes milk sucked by calves.

3/ Milk cows will not add due to rounding.

Grain and Other Concentrates: Quantity Fed Daily and Value
By State and United States, January 1, 1993-94

State	Grain and Other Concentrates : Value Per 100 Pounds of Concentrate		Fed Daily Per Milk Cow : Ration Fed to Milk Cows	
	1993	1994	1993	1994
	----- Pounds -----		----- Dollars -----	
AL	17.3	17.4	8.30	9.10
AK	19.0	19.0	13.50	13.50
AZ	21.9	21.8	7.00	7.55
AR	17.7	17.9	7.85	8.36
CA	21.1	21.0	7.30	7.75
CO	23.0	22.0	6.50	7.00
CT	16.0	18.0	8.95	8.50
DE	16.0	15.8	8.47	8.42
FL	26.0	30.0	7.50	7.30
GA	22.4	22.6	8.20	8.20
ID	21.0	20.0	6.60	6.60
IL	17.3	18.3	8.05	8.80
IN	17.1	16.8	7.74	8.06
IA	17.2	16.6	6.80	8.20
KS	19.3	19.0	7.50	7.53
KY	17.1	17.3	8.23	8.80
LA	18.5	18.0	8.30	8.65
ME	15.5	16.5	8.90	9.15
MD	15.8	15.3	8.75	8.91
MA	16.3	14.5	9.00	9.20
MI	16.4	16.5	6.90	6.50
MN	17.8	17.7	7.10	8.20
MS	18.3	18.2	8.10	8.55
MO	17.5	18.5	7.65	8.15
MT	16.5	18.3	7.15	7.70
NE	15.9	17.3	6.80	7.30
NV	22.0	20.0	7.90	8.30
NH	16.2	15.5	9.00	8.90
NJ	14.0	14.5	9.15	8.80
NM	24.0	25.0	6.50	6.60
NY	15.9	14.9	9.00	9.30
NC	18.1	18.4	8.90	9.15
ND	16.1	15.8	5.75	6.05
OH	17.6	17.0	8.20	8.50
OK	20.5	19.5	7.60	8.30
OR	17.5	18.5	8.70	9.00
PA	15.7	15.2	8.90	9.25
RI	15.5	15.5	9.05	8.50
SC	17.5	18.0	8.20	8.35
SD	16.2	16.9	6.10	6.85
TN	16.0	17.0	9.00	9.30
TX	22.7	23.3	7.50	8.10
UT	17.5	18.1	7.10	7.20
VT	15.0	15.0	8.85	9.00
VA	15.9	17.2	8.80	8.80
WA	20.5	21.0	8.15	8.20
WV	15.0	16.8	8.60	9.16
WI	17.7	18.0	7.05	8.10
WY	11.6	12.3	6.05	6.40
US	18.4	18.5	7.67	8.18

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	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	-148	-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.

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