

# Milk Production



USDA  
Washington, D.C.

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Released April 15, 1997, by the National Agricultural Statistics Service (NASS), Agricultural Statistics Board, U.S. Department of Agriculture. For information on "Milk Production" call Kevin Hintzman at (202) 720-4448, office hours 7:30 a.m. to 4:00 p.m. ET.

## March Production Up 0.3 Percent

**Milk production** in the 20 major States during March totaled 11.5 billion pounds, up 0.3 percent from production in these same States in March 1996. February revised production, at 10.3 billion pounds was down 2.3 percent from February 1996.

**Production per cow** in the 20 major States averaged 1,491 pounds for March, 22 pounds above March 1996.

**The number of cows** on farms in the 20 major States was 7.73 million head, 90,000 head less than March 1996 and 11,000 head less than February 1997.

**The January-March quarterly production of milk** for the U.S. was 38.8 billion pounds, down 0.6 percent from the January-March period in 1996. The average number of milk cows in the U.S. during the January-March quarter was 9.26 million head, 133,000 head less than the same period a year earlier.

## Grain and Other Concentrates Fed

**Grain and other concentrates** fed to milk cows on April 1, 1997, averaged 19.5 pounds per cow, 0.9 pound more than April 1, 1996.

## Value of Grain and Other Concentrates

**The value of grain and other concentrates** fed to milk cows on April 1, 1997, averaged \$8.79 per hundredweight, \$.36 less than April 1, 1996.

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### Note:

The revisions in Arizona data were made because information were not available for the annual report in February 1997.

Milk Cows and Production: By Quarter, United States, 1996-97

Quarter	Milk Cows 1/		Milk per Cow 2/		Milk Production 2/		
	1996	1997	1996	1997	1996	1997	% Change from 1996
	---- 1,000 ----		Pounds		Million Pounds		
Jan-Mar	9,397	9,264	4,156	4,190	39,053	38,812	-0.6
Apr-Jun	9,369		4,231		39,638		
Jul-Sep	9,338		4,035		37,674		
Oct-Dec	9,300		4,083		37,966		
Annual	9,351		16,505		154,331		

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

2/ Excludes milk sucked by calves.

Milk Cows and Production: By Month, 20 Selected States, 1996-97

Month	Milk Cows 1/		Milk per Cow 2/		Milk Production 2/		
	1996	1997	1996	1997	1996	1997	% Change from 1996
	---- 1,000 ----		Pounds		Million Pounds		
Jan	7,846	7,757	1,415	1,439	11,103	11,163	0.5
Feb	7,828	7,743	1,348	1,331	10,549	10,309	-2.3
Mar	7,822	7,732	1,469	1,491	11,487	11,527	0.3
Apr	7,818		1,441		11,265		
May	7,816		1,479		11,560		
Jun	7,818		1,398		10,926		
Jul	7,815		1,400		10,944		
Aug	7,802		1,382		10,786		
Sep	7,795		1,342		10,459		
Oct	7,788		1,391		10,831		
Nov	7,775		1,350		10,499		
Dec	7,765		1,418		11,013		
Annual	7,807		16,833		131,422		

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

2/ Excludes milk sucked by calves.

Estimated Milk Production, United States, 1996-97

Month	by Month			Cumulative		
	1996	1997	% Change from 1996	1996	1997	% Change from 1996
	Million Pounds			Million Pounds		
Jan	13,085	13,129	0.3	13,085	13,129	0.3
Feb	12,431	12,125	-2.5	25,516	25,254	-1.0
Mar	13,537	13,558	0.2	39,053	38,812	-0.6
Apr	13,230			52,283		
May	13,576			65,859		
Jun	12,832			78,691		
Jul	12,809			91,500		
Aug	12,624			104,124		
Sep	12,241			116,365		
Oct	12,714			129,079		
Nov	12,324			141,403		
Dec	12,928			154,331		

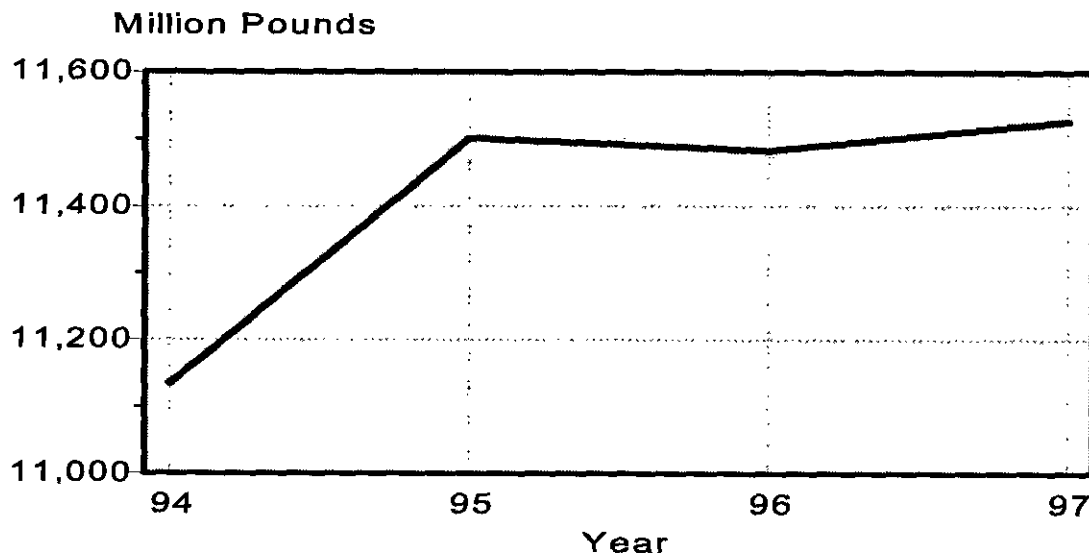
Milk Cows and Production: By State, March 1996-97

State	Milk Cows 1/		Milk per Cow 2/		Milk Production 2/		
	1996	1997	1996	1997	1996	1997	% Change from 1996
	---- 1,000 ----		Pounds		Million Pounds		
AZ	119	126	1,960	2,055	233	259	11.2
CA	1,260	1,274	1,725	1,810	2,174	2,306	6.1
FL	156	160	1,475	1,480	230	237	3.0
ID	247	264	1,500	1,540	371	407	9.7
IL	157	148	1,320	1,360	207	201	-2.9
IN	140	140	1,380	1,310	193	183	-5.2
IA	249	248	1,300	1,370	324	340	4.9
KY	156	147	1,075	1,060	168	156	-7.1
MI	321	306	1,485	1,520	477	465	-2.5
MN	595	590	1,400	1,385	833	817	-1.9
MO	183	174	1,245	1,185	228	206	-9.6
NM	193	199	1,675	1,730	323	344	6.5
NY	700	700	1,460	1,410	1,022	987	-3.4
OH	285	283	1,380	1,360	393	385	-2.0
PA	645	639	1,465	1,470	945	939	-0.6
TX	400	390	1,480	1,445	592	564	-4.7
VT	157	155	1,425	1,405	224	218	-2.7
VA	127	124	1,265	1,290	161	160	-0.6
WA	262	265	1,685	1,720	441	456	3.4
WI	1,470	1,400	1,325	1,355	1,948	1,897	-2.6
20 State:							
Total	7,822	7,732	1,469	1,491	11,487	11,527	0.3

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

2/ Excludes milk sucked by calves.

### March Milk Production, 1994-1997 20 States

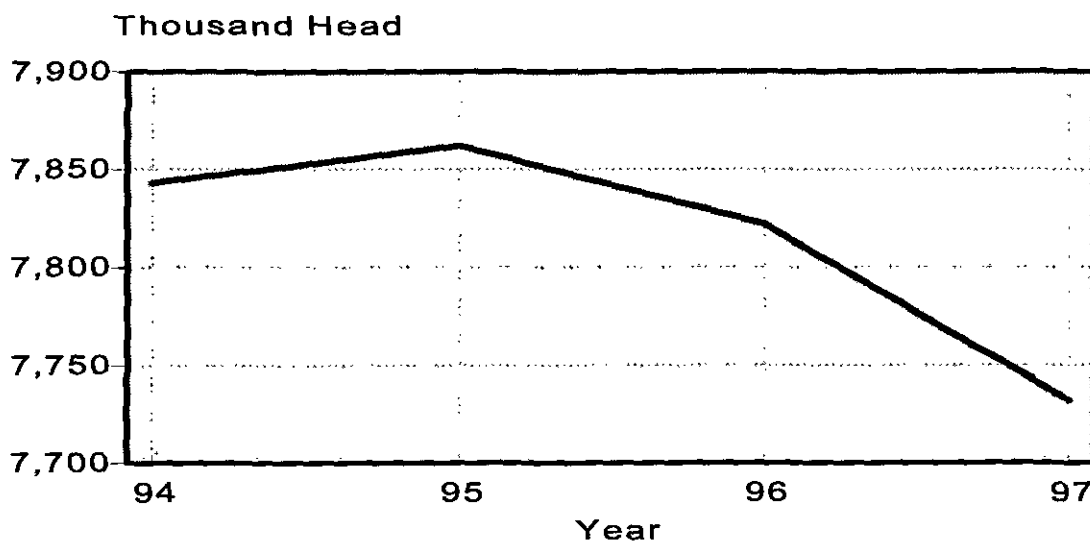


Milk Cows and Production: By State, February 1996-97 1/

State	Milk Cows 2/		Milk per Cow 3/		Milk Production 3/		
	1996	1997	1996	1997	1996	1997	% Change from 1996
	---- 1,000 ----		Pounds		Million Pounds		
AZ	118	124	1,770	1,840	209	228	9.1
CA	1,260	1,272	1,585	1,595	1,997	2,029	1.6
FL	155	159	1,405	1,430	218	227	4.1
ID	246	266	1,370	1,360	337	362	7.4
IL	157	149	1,260	1,270	198	189	-4.5
IN	140	140	1,260	1,180	176	165	-6.2
IA	250	249	1,180	1,185	295	295	0.0
KY	157	150	980	965	154	145	-5.8
MI	322	310	1,365	1,370	440	425	-3.4
MN	600	590	1,285	1,245	771	735	-4.7
MO	183	174	1,125	1,045	206	182	-11.7
NM	193	197	1,520	1,555	293	306	4.4
NY	700	700	1,340	1,260	938	882	-6.0
OH	285	285	1,290	1,260	368	359	-2.4
PA	645	639	1,345	1,290	868	824	-5.1
TX	400	390	1,345	1,295	538	505	-6.1
VT	157	155	1,320	1,290	207	200	-3.4
VA	127	124	1,165	1,180	148	146	-1.4
WA	263	266	1,530	1,525	402	406	1.0
WI	1,470	1,404	1,215	1,210	1,786	1,699	-4.9
20 State:							
Total	7,828	7,743	1,348	1,331	10,549	10,309	-2.3

1/ 1997 revised. 2/ Includes dry cows, excludes heifers not yet fresh.  
3/ Excludes milk sucked by calves.

### March Milk Cows, 1994-1997 20 States



Milk Cows and Production: By State and United States  
Revised October-December, 1995-96

State	Oct-Dec Milk Cows 1/		Oct-Dec Milk Production 2/		% Change from 1995
	1995	1996	1995	1996	
	1,000		Million Pounds		Percent
AL	32	31	112	103	-8.0
AK	.7	0.8	3.07	3.52	14.7
AZ	113	122	555	630	13.5
AR	59	56	174	165	-5.2
CA	1,258	1,269	6,252	6,586	5.3
CO	82	84	389	413	6.2
CT	31	29	129	118	-8.5
DE	10	9.5	35.1	33.1	-5.7
FL	156	157	547	596	9.0
GA	98	98	363	370	1.9
HI	10.3	9.5	31.3	29.1	-7.0
ID	242	266	1,089	1,230	12.9
IL	159	151	534	557	4.3
IN	142	140	539	535	-0.7
IA	250	250	994	966	-2.8
KS	83	81	295	310	5.1
KY	159	151	477	458	-4.0
LA	79	78	210	205	-2.4
ME	39	39	156	158	1.3
MD	91	85	327	321	-1.8
MA	27	26	110	107	-2.7
MI	326	314	1,349	1,330	-1.4
MN	600	595	2,262	2,300	1.7
MS	53	49	161	161	0.0
MO	186	175	628	574	-8.6
MT	20	20	77	77	0.0
NE	72	69	273	264	-3.3
NV	23	26	104.2	123	18.0
NH	20	18	82	76	-7.3
NJ	23	21	76	71	-6.6
NM	196	196	883	935	5.9
NY	702	701	2,840	2,757	-2.9
NC	84	79	329	313	-4.9
ND	63	61	198	184	-7.1
OH	287	285	1,113	1,063	-4.5
OK	97	95	320	300	-6.2
OR	96	92	400	388	-3.0
PA	647	643	2,624	2,587	-1.4
RI	2.1	1.9	7.9	7.8	-1.3
SC	26	26	94	97	3.2
SD	116	110	371	352	-5.1
TN	122	114	414	401	-3.1
TX	400	393	1,485	1,461	-1.6
UT	88	90	363	391	7.7
VT	157	155	634	631	-0.5
VA	128	126	473	453	-4.2
WA	265	266	1,280	1,308	2.2
WV	21	19	65	60	-7.7
WI	1,480	1,421	5,491	5,386	-1.9
WY	5.9	6	21.5	21.6	0.5
US 3/	9,428	9,300	37,740	37,966	0.6

- 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 January-March, 1996-97

State	Jan-Mar Milk Cows 1/		Jan-Mar Milk Production 2/		% Change :from 1996
	1996	1997	1996	1997	
	---- 1,000 ----		-- Million Pounds --		
AL	32	31	127	115	-9.4
AK	0.8	0.9	3.1	3.47	11.9
AZ	118	124	653	709	8.6
AR	59	56	186	176	-5.4
CA	1,260	1,272	6,282	6,519	3.8
CO	83	85	396	420	6.1
CT	31	29	133	123	-7.5
DE	9.7	10.5	37.4	41	9.6
FL	155	159	666	705	5.9
GA	97	97	412	412	0.0
HI	9.6	9.5	33.4	31.7	-5.1
ID	246	266	1,073	1,171	9.1
IL	157	149	610	582	-4.6
IN	140	140	550	533	-3.1
IA	250	249	934	960	2.8
KS	85	82	310	330	6.5
KY	157	149	485	461	-4.9
LA	78	78	233	223	-4.3
ME	40	39	161	162	0.6
MD	89	86	338	340	0.6
MA	27	26	111	108	-2.7
MI	323	309	1,380	1,350	-2.2
MN	598	592	2,420	2,361	-2.4
MS	53	48	182	183	0.5
MO	184	174	651	600	-7.8
MT	20	19	75	74	-1.3
NE	69	69	268	265	-1.1
NV	24	26	107	117	9.3
NH	20	18	85	82	-3.5
NJ	23	21	78	75	-3.8
NM	193	198	919	980	6.6
NY	700	700	2,940	2,835	-3.6
NC	83	77	344	325	-5.5
ND	63	59	208	183	-12.0
OH	285	284	1,139	1,124	-1.3
OK	97	97	325	325	0.0
OR	94	92	394	386	-2.0
PA	646	640	2,723	2,651	-2.6
RI	2.1	2	8	8.2	2.5
SC	26	26	105	107	1.9
SD	113	106	375	339	-9.6
TN	119	113	433	400	-7.6
TX	400	390	1,682	1,611	-4.2
UT	90	92	358	373	4.2
VT	157	155	650	633	-2.6
VA	127	124	467	465	-0.4
WA	263	266	1,278	1,301	1.8
WV	21	19	68	65	-4.4
WI	1,472	1,404	5,637	5,448	-3.4
WY	6	6.1	20.4	20.7	1.5
US 3/	9,397	9,264	39,053	38,812	-0.6

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, April 1, 1996-97

State	: Grain and Other Concentrates : Value per 100 Pounds of Concentrate		: Ration Fed to Milk Cows	
	: Fed Daily per Milk Cow	:	: 1996	: 1997
	: Pounds		: Dollars	
AL	20.1	19.4	9.80	9.50
AK	19.5	19.5	13.80	14.80
AZ	19.3	23.0	8.75	8.40
AR	19.0	18.5	9.75	9.40
CA	19.0	21.0	9.10	8.40
CO	23.0	23.0	8.90	7.80
CT	17.5	18.0	10.60	10.80
DE	13.9	13.8	9.80	9.20
FL	22.0	30.0	8.00	8.10
GA	24.0	24.0	9.20	9.10
ID	23.0	22.5	8.10	7.70
IL	16.9	18.8	9.60	9.00
IN	17.7	17.6	8.30	10.00
IA	15.1	16.7	7.90	7.80
KS	19.0	19.0	8.80	8.60
KY	16.8	17.3	10.30	10.05
LA	19.0	19.6	9.85	9.80
ME	16.5	16.5	10.70	10.80
MD	15.4	15.9	10.30	10.20
MA	16.0	15.0	10.20	10.70
MI	19.0	16.5	8.10	8.40
MN	17.8	18.1	8.90	8.20
MS	18.7	18.7	9.40	9.50
MO	18.0	18.5	8.80	8.70
MT	17.1	16.5	8.80	7.90
NE	17.1	17.0	8.10	7.50
NV	20.0	22.5	8.90	9.00
NH	16.5	17.5	10.55	11.20
NJ	15.6	15.8	11.45	11.00
NM	26.0	28.0	8.20	7.40
NY	15.2	15.3	10.80	10.80
NC	18.6	18.8	10.50	10.30
ND	16.6	16.0	7.40	6.45
OH	17.5	17.6	9.20	9.30
OK	20.0	21.0	9.70	8.80
OR	19.5	18.5	9.50	9.90
PA	18.0	18.0	10.30	10.50
RI	15.0	15.0	10.10	10.00
SC	19.0	22.5	9.30	9.35
SD	16.3	15.9	8.00	7.20
TN	17.0	18.0	10.70	10.30
TX	23.0	24.2	9.40	9.10
UT	17.1	17.5	9.20	8.45
VT	15.5	15.0	10.80	10.40
VA	15.8	16.7	9.90	9.70
WA	19.0	21.0	9.30	9.10
WV	14.5	16.0	10.00	10.00
WI	18.7	18.5	8.40	7.70
WY	13.0	13.2	8.05	7.10
US	18.6	19.5	9.15	8.79

Milk Cows: Number by Month, Arizona and 20 States, Revised, 1996 1/

State	Jan	Feb	Mar	Apr	May	Jun	
				1,000			
AZ	118	118	119	119	119	120	
20 States 2/	7,846	7,828	7,822	7,818	7,816	7,818	
	Jul	Aug	Sep	Oct	Nov	Dec	Annual Avg. 3/
AZ	122	122	122	122	122	122	120
20 States 2/	7,815	7,802	7,795	7,788	7,775	7,765	7,807

Milk Produced: Rate per Cow, by Month, Arizona and 20 States, Revised, 1996 4/

State	Jan	Feb	Mar	Apr	May	Jun	
				Pounds			
AZ	1,790	1,770	1,960	1,905	1,905	1,700	
20 States 2/	1,415	1,348	1,469	1,441	1,479	1,398	
	Jul	Aug	Sep	Oct	Nov	Dec	Annual Avg.
AZ	1,445	1,440	1,475	1,620	1,690	1,855	20,608
20 States 2/	1,400	1,382	1,342	1,391	1,350	1,418	16,833

Milk Production: Total by Month, Arizona and 20 States, Revised, 1996 4/

State	Jan	Feb	Mar	Apr	May	Jun	
				Million Pounds			
AZ	211	209	233	227	227	204	
20 States 2/	11,103	10,549	11,487	11,265	11,560	10,926	
	Jul	Aug	Sep	Oct	Nov	Dec	Annual Total
AZ	176	176	180	198	206	226	2,473
20 States 2/	10,944	10,786	10,459	10,831	10,499	11,013	131,422

1/ Includes dry cows, excludes heifers not yet fresh. 2/ AZ, CA, FL, ID, IL, IN, IA, KY, MI, MN, MO, NM, NY, OH, PA, TX, VT, VA, WA, and WI. 3/ Average based on monthly totals. 4/ Excludes milk sucked by calves.



Milk Cows and Production: Number and Total Produced  
by Quarter, Arizona, and United States, Revised, 1996

State	Milk Cows 1/				Milk Production 2/			
	Jan-Mar	Apr-Jun	Jul-Sep	Oct-Dec	Jan-Mar	Apr-Jun	Jul-Sep	Oct-Dec
	1,000 Head				Million Pounds			
AZ	118	119	122	122	653	658	532	630
US 3/	9,397	9,369	9,338	9,300	39,053	39,638	37,674	37,966

1/ Quarterly average includes dry cows, excludes heifers not yet fresh.  
2/ Excludes milk sucked by calves. 3/ Will not add due to rounding.

## Reliability Statement

**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.

**Estimation Procedures:** State offices prepare these estimates using 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, 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 basis for revisions. However, data for all orders are not available in time for this revision. 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 cow inventory estimates over the past 10 quarters is 1.1 percent. This means that chances are 2 out of 3 that the final January-March estimate will not be above or below the current estimate of 9.26 million head by more than 1.1 percent, or about 102,000 head. Chances are 9 out of 10 that the difference will not exceed 2.0 percent, or about 185,000 head (the 90 percent confidence level).

Reliability of January-March Milk Estimates 1/

Item	Root	Mean	90% Confidence Level	Difference Between First and Final Estimates 1/			Number of Quarters	
	Square Error	Mean	Confidence Level	Average	Smallest	Largest	Above	Below
	Percent	Mil Lbs.			Number			
Milk Production	0.5	0.9	349	169	30	315	8	2
		----- 1,000 Head -----						
All Milk Cows	1.1	2.0	185	91	5	187	10	0

1/ Based on records for the past 10 January-March quarters.

The next "Milk Production" report will be released at 3:00 p.m. ET on May 15, 1997.

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