

# Milk Production

Released April 17, 2003, by the National Agricultural Statistics Service (NASS), Agricultural Statistics Board, U.S. Department of Agriculture. For information on "Milk Production" call Ty Kalas at 202-690-3236, office hours 7:30 a.m. to 4:00 p.m. ET.

## March Milk Production Up 1.5 Percent

**Milk production** in the 20 major States during March totaled 13.0 billion pounds, up 1.5 percent from March 2002. February revised production, at 11.6 billion pounds, was up 1.6 percent from February 2002. The February revision represented a decrease of 8 million pounds from last month's preliminary production estimate.

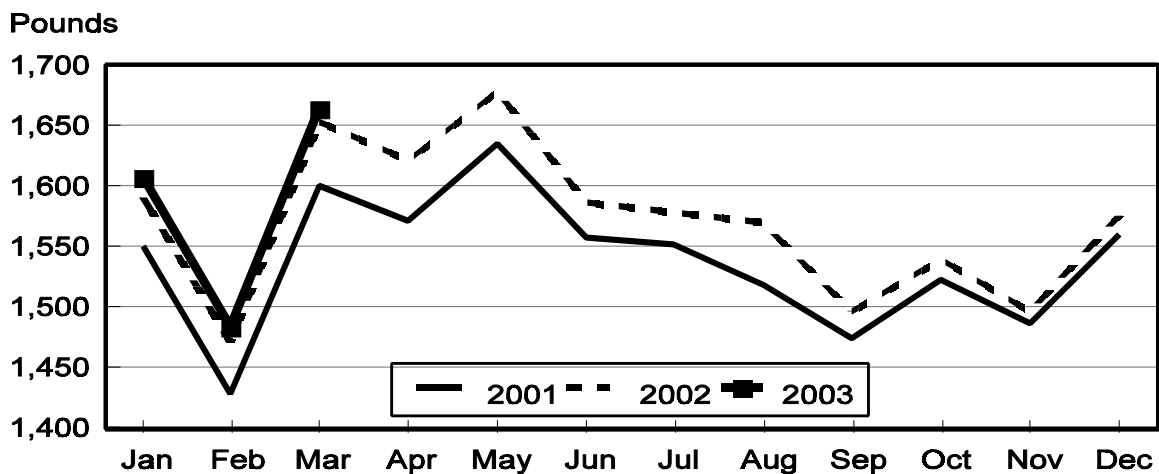
**Production per cow** in the 20 major States averaged 1,664 pounds for March, 10 pounds above March 2002.

**The number of milk cows** on farms in the 20 major States was 7.81 million head, 67,000 head more than March 2002, and 2,000 head more than February 2003.

## January-March Milk Production Up 1.3 Percent

Milk production in the U.S. during the January-March quarter totaled 43.0 billion pounds, up 1.3 percent from the January-March quarter last year. The average number of milk cows in the U.S. during the quarter was 9.16 million head, 43,000 head more than the same period last year.

## Monthly Milk per Cow 20 States



**Milk Cows and Production: By Quarter, United States, 2002-2003<sup>1</sup>**

Quarter	Milk Cows <sup>2</sup>		Milk Per Cow <sup>3</sup>		Milk Production <sup>3</sup>		
	2002	2003	2002	2003	2002	2003	Change From 2002
	<i>1,000 Head</i>	<i>1,000 Head</i>	<i>Pounds</i>	<i>Pounds</i>	<i>Million Pounds</i>	<i>Million Pounds</i>	<i>Percent</i>
Jan-Mar	9,112	9,155	4,653	4,692	42,397	42,958	1.3
Apr-Jun	9,149		4,811		44,015		
Jul-Sep	9,153		4,566		41,791		
Oct-Dec	9,148		4,543		41,555		
Annual	9,141		18,571		169,758		

<sup>1</sup> May not add due to rounding.

<sup>2</sup> Includes dry cows, excludes heifers not yet fresh.

<sup>3</sup> Excludes milk sucked by calves.

**Milk Cows and Production: By Month, 20 Selected States, 2002-2003<sup>1</sup>**

Month	Milk Cows <sup>2</sup>		Milk Per Cow <sup>3</sup>		Milk Production <sup>3</sup>		
	2002	2003	2002	2003	2002	2003	Change From 2002
	<i>1,000 Head</i>	<i>1,000 Head</i>	<i>Pounds</i>	<i>Pounds</i>	<i>Million Pounds</i>	<i>Million Pounds</i>	<i>Percent</i>
Jan	7,749	7,807	1,591	1,607	12,327	12,548	1.8
Feb	7,744	7,810	1,472	1,484	11,401	11,588	1.6
Mar	7,745	7,812	1,654	1,664	12,810	12,996	1.5
Apr	7,758		1,621		12,575		
May	7,769		1,678		13,039		
Jun	7,782		1,587		12,348		
Jul	7,781		1,578		12,281		
Aug	7,785		1,570		12,223		
Sep	7,781		1,497		11,648		
Oct	7,789		1,539		11,991		
Nov	7,792		1,496		11,657		
Dec	7,801		1,575		12,290		
Annual	7,773		18,858		146,590		

<sup>1</sup> 2003 revised.

<sup>2</sup> Includes dry cows, excludes heifers not yet fresh.

<sup>3</sup> Excludes milk sucked by calves.

**Estimated Milk Cows and Production: By Month, United States, 2002-2003<sup>1</sup>**

Month	Milk Cows <sup>2</sup>		Milk Per Cow <sup>3</sup>		Milk Production <sup>3</sup>		
	2002	2003	2002	2003	2002	2003	Change From 2002
	<i>1,000 Head</i>	<i>1,000 Head</i>	<i>Pounds</i>	<i>Pounds</i>	<i>Million Pounds</i>	<i>Million Pounds</i>	<i>Percent</i>
Jan	9,117	9,153	1,569	1,586	14,304	14,517	1.5
Feb	9,109	9,155	1,452	1,464	13,229	13,406	1.3
Mar	9,110	9,157	1,632	1,642	14,864	15,035	1.2
Apr	9,132		1,597		14,580		
May	9,149		1,652		15,118		
Jun	9,166		1,562		14,317		
Jul	9,158		1,550		14,196		
Aug	9,157		1,543		14,128		
Sep	9,145		1,473		13,467		
Oct	9,147		1,516		13,866		
Nov	9,146		1,474		13,478		
Dec	9,150		1,553		14,211		
Annual	9,141		18,571		169,758		

<sup>1</sup> 2003 revised.

<sup>2</sup> Includes dry cows, excludes heifers not yet fresh.

<sup>3</sup> Excludes milk sucked by calves.

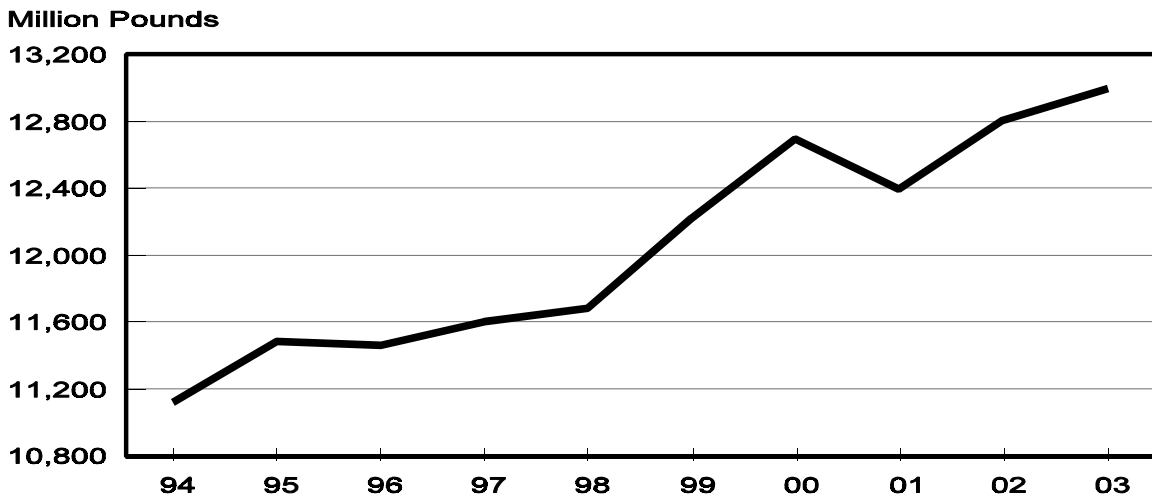
**Milk Cows and Production: By State, March 2002-2003**

State	Milk Cows <sup>1</sup>		Milk Per Cow <sup>2</sup>		Milk Production <sup>2</sup>		
	2002	2003	2002	2003	2002	2003	Change From 2002
	<i>1,000 Head</i>	<i>1,000 Head</i>	<i>Pounds</i>	<i>Pounds</i>	<i>Million Pounds</i>	<i>Million Pounds</i>	<i>Percent</i>
AZ	143	150	2,250	2,155	322	323	0.3
CA	1,631	1,691	1,830	1,825	2,985	3,086	3.4
FL	151	147	1,505	1,515	227	223	-1.8
ID	381	395	1,760	1,850	671	731	8.9
IL	115	113	1,620	1,670	186	189	1.6
IN	153	145	1,495	1,565	229	227	-0.9
IA	209	203	1,615	1,640	338	333	-1.5
KY	123	120	1,245	1,150	153	138	-9.8
MI	295	299	1,730	1,755	510	525	2.9
MN	490	480	1,560	1,555	764	746	-2.4
MO	138	131	1,335	1,340	184	176	-4.3
NM	293	315	1,830	1,835	536	578	7.8
NY	675	686	1,565	1,540	1,056	1,056	
OH	261	260	1,500	1,500	392	390	-0.5
PA	581	585	1,630	1,600	947	936	-1.2
TX	309	312	1,605	1,650	496	515	3.8
VT	154	151	1,530	1,530	236	231	-2.1
VA	120	118	1,450	1,370	174	162	-6.9
WA	247	248	1,930	1,960	477	486	1.9
WI	1,276	1,263	1,510	1,540	1,927	1,945	0.9
20-State Total	7,745	7,812	1,654	1,664	12,810	12,996	1.5

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

<sup>2</sup> Excludes milk sucked by calves.

**March Milk Production, 1994-2003  
20 States**



**Milk Cows and Production: By State, February 2002-2003 <sup>1</sup>**

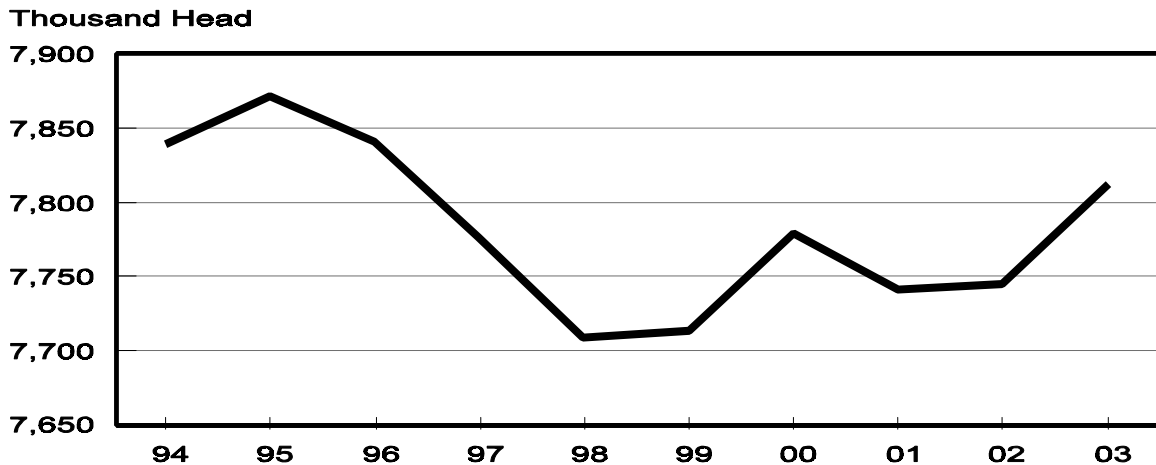
State	Milk Cows <sup>2</sup>		Milk per Cow <sup>3</sup>		Milk Production <sup>3</sup>		
	2002	2003	2002	2003	2002	2003	Change From 2002
	<i>1,000 Head</i>	<i>1,000 Head</i>	<i>Pounds</i>	<i>Pounds</i>	<i>Million Pounds</i>	<i>Million Pounds</i>	<i>Percent</i>
AZ	142	150	1,970	1,915	280	287	2.5
CA	1,626	1,686	1,620	1,635	2,634	2,757	4.7
FL	152	147	1,335	1,345	203	198	-2.5
ID	381	394	1,590	1,650	606	650	7.3
IL	115	114	1,440	1,485	166	169	1.8
IN	154	146	1,340	1,400	206	204	-1.0
IA	208	204	1,430	1,480	297	302	1.7
KY	123	120	1,100	1,000	135	120	-11.1
MI	295	299	1,545	1,560	456	466	2.2
MN	495	480	1,385	1,385	686	665	-3.1
MO	139	133	1,150	1,150	160	153	-4.4
NM	290	313	1,610	1,615	467	505	8.1
NY	672	682	1,405	1,390	944	948	0.4
OH	260	260	1,365	1,360	355	354	-0.3
PA	583	588	1,460	1,430	851	841	-1.2
TX	310	311	1,400	1,450	434	451	3.9
VT	154	152	1,375	1,370	212	208	-1.9
VA	120	118	1,290	1,210	155	143	-7.7
WA	247	248	1,735	1,750	429	434	1.2
WI	1,278	1,265	1,350	1,370	1,725	1,733	0.5
20-State Total	7,744	7,810	1,472	1,484	11,401	11,588	1.6

<sup>1</sup> 2003 revised.

<sup>2</sup> Includes dry cows, excludes heifers not yet fresh.

<sup>3</sup> Excludes milk sucked by calves.

**March Milk Cows, 1994-2003  
20 States**



**Milk Cows and Production: By State and United States,  
Revised October-December, 2001-2002**

State	Oct-Dec Milk Cows <sup>1</sup>		Oct-Dec Milk Production <sup>2</sup>		Change From 2001
	2001	2002	2001	2002	
	<i>1,000 Head</i>	<i>1,000 Head</i>	<i>Million Pounds</i>	<i>Million Pounds</i>	<i>Percent</i>
AL	21	19	70	63	-10.0
AK	1.2	1.3	3.72	4.36	17.2
AZ	140	150	770	821	6.6
AR	33	31	96	87	-9.4
CA	1,613	1,670	8,331	8,674	4.1
CO	93	99	501	540	7.8
CT	24	23	110	107	-2.7
DE	9.0	9.0	37.0	36.0	-2.7
FL	152	147	549	528	-3.8
GA	86	85	344	344	
HI	7.4	6.6	23.2	22.7	-2.2
ID	373	390	1,976	2,041	3.3
IL	115	115	487	500	2.7
IN	155	147	650	641	-1.4
IA	206	208	930	936	0.6
KS	94	105	425	515	21.2
KY	125	120	402	374	-7.0
LA	54	49	145	128	-11.7
ME	38	36	162	157	-3.1
MD	81	80	320	327	2.2
MA	21	20	88	87	-1.1
MI	301	301	1,458	1,484	1.8
MN	500	480	2,111	2,042	-3.3
MS	34	33	113	105	-7.1
MO	141	135	466	466	
MT	19	18	87	85	-2.3
NE	69	66	283	290	2.5
NV	25	25	120	121	0.8
NH	18	17	80	79	-1.3
NJ	14	13	56	57	1.8
NM	280	306	1,434	1,564	9.1
NY	674	678	2,962	2,973	0.4
NC	66	63	285	267	-6.3
ND	44	38	154	140	-9.1
OH	257	261	1,080	1,086	0.6
OK	88	88	316	316	
OR	105	117	463	529	14.3
PA	595	591	2,676	2,641	-1.3
RI	1.4	1.4	5.5	5.4	-1.8
SC	20	20	88	83	-5.7
SD	98	95	393	336	-14.5
TN	89	84	320	305	-4.7
TX	312	310	1,221	1,292	5.8
UT	93	92	408	409	0.2
VT	154	153	668	654	-2.1
VA	119	119	471	451	-4.2
WA	247	247	1,355	1,374	1.4
WV	16	15	61	57	-6.6
WI	1,280	1,267	5,377	5,396	0.4
WY	4.5	4.1	16.2	14.3	-11.7
US <sup>3</sup>	9,106	9,148	40,948	41,555	1.5

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

<sup>2</sup> Excludes milk sucked by calves.

<sup>3</sup> May not add due to rounding.

**Milk Cows and Production: By State and United States,  
Preliminary January-March, 2002-2003**

State	Jan-Mar Milk Cows <sup>1</sup>		Jan-Mar Milk Production <sup>2</sup>		Change From 2002
	2002	2003	2002	2003	
	<i>1,000 Head</i>	<i>1,000 Head</i>	<i>Million Pounds</i>	<i>Million Pounds</i>	<i>Percent</i>
AL	20	18	79	70	-11.4
AK	1.2	1.3	4.02	4.33	7.7
AZ	142	150	894	915	2.3
AR	33	30	107	96	-10.3
CA	1,627	1,686	8,453	8,818	4.3
CO	97	101	521	552	6.0
CT	24	23	116	108	-6.9
DE	9.5	9.0	42.0	37.7	-10.2
FL	152	147	644	629	-2.3
GA	85	85	395	399	1.0
HI	6.7	6.6	24.5	24.0	-2.0
ID	381	394	1,942	2,087	7.5
IL	115	114	530	538	1.5
IN	154	146	660	655	-0.8
IA	208	205	956	965	0.9
KS	100	104	480	520	8.3
KY	123	120	432	392	-9.3
LA	51	48	170	149	-12.4
ME	38	35	164	155	-5.5
MD	81	79	333	331	-0.6
MA	21	20	91	88	-3.3
MI	296	300	1,456	1,506	3.4
MN	493	480	2,200	2,141	-2.7
MS	34	32	139	122	-12.2
MO	139	133	513	495	-3.5
MT	18	18	83	84	1.2
NE	68	66	299	297	-0.7
NV	25	26	118	127	7.6
NH	18	17	84	79	-6.0
NJ	13	13	60	57	-5.0
NM	291	313	1,508	1,622	7.6
NY	674	683	3,033	3,027	-0.2
NC	65	62	298	279	-6.4
ND	41	37	148	143	-3.4
OH	260	260	1,132	1,120	-1.1
OK	88	88	328	333	1.5
OR	105	117	486	526	8.2
PA	584	588	2,720	2,686	-1.3
RI	1.4	1.4	5.8	5.8	
SC	20	20	102	96	-5.9
SD	97	93	363	352	-3.0
TN	90	82	350	325	-7.1
TX	310	311	1,392	1,448	4.0
UT	93	92	391	397	1.5
VT	154	152	681	668	-1.9
VA	120	118	496	463	-6.7
WA	247	248	1,370	1,394	1.8
WV	16	15	62	56	-9.7
WI	1,278	1,264	5,526	5,563	0.7
WY	4.5	3.9	15.8	13.3	-15.8
US <sup>3</sup>	9,112	9,155	42,397	42,958	1.3

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

<sup>2</sup> Excludes milk sucked by calves.

<sup>3</sup> May 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. Where feasible, States utilize state and federal administrative data, rather than conduct a monthly or quarterly survey, 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 and July Cattle Surveys.

**Estimation Procedures:** State 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, 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 January-March quarters is 0.7 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 9.16 million head by more than 0.7 percent. Chances are 9 out of 10 that the difference will not exceed 1.2 percent.

**Reliability of January-March Milk Estimates <sup>1</sup>**

Item	Root Mean Square Error	90% Confidence Level		Difference Between First and Latest Estimates			Quarters	
				Average	Smallest	Largest	First Above Latest	First Below Latest
				<i>Million Pounds</i>	<i>Million Pounds</i>	<i>Million Pounds</i>	<i>Number</i>	<i>Number</i>
Milk Production	<i>Percent</i>	<i>Percent</i>	<i>Million Pounds</i>	<i>Million Pounds</i>	<i>Million Pounds</i>	<i>Million Pounds</i>	<i>Number</i>	<i>Number</i>
	0.4	0.7	301	125	18	329	6	4
All Milk Cows	<i>Percent</i>	<i>Percent</i>	<i>1,000 Head</i>	<i>1,000 Head</i>	<i>1,000 Head</i>	<i>1,000 Head</i>	<i>Number</i>	<i>Number</i>
	0.7	1.2	110	39	0	143	6	3

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



**The next "Milk Production" report will be released at 3 p.m. ET on May 16, 2003.**

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