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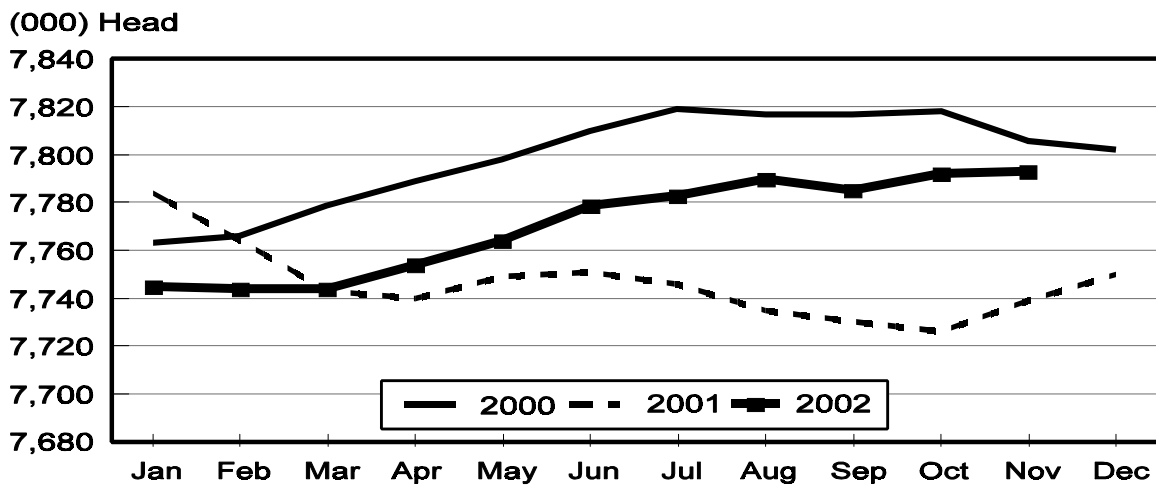
## November Milk Production Up 1.8 Percent

**Milk production** in the 20 major States during November totaled 11.7 billion pounds, up 1.8 percent from November 2001. October revised production, at 12.0 billion pounds, was up 2.1 percent from October 2001. The October revision represented a decrease of 26 million pounds or 0.2 percent from last month's preliminary production estimate.

**Production per cow** in the 20 major States averaged 1,501 pounds for November, 16 pounds above November 2001.

**The number of milk cows** on farms in the 20 major States was 7.79 million head, 54,000 head more than November 2001, and 1,000 head more than October 2002.

## Monthly Milk Cows 20 States



**Milk Cows and Production: By Quarter, United States, 2001-2002 <sup>1</sup>**

Quarter	Milk Cows <sup>2</sup>		Milk Per Cow <sup>3</sup>		Milk Production <sup>3</sup>		
	2001	2002	2001	2002	2001	2002	Change From 2001
	<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	9,143	9,109	4,514	4,639	41,267	42,256	2.4
Apr-Jun	9,114	9,145	4,683	4,806	42,681	43,954	3.0
Jul-Sep	9,098	9,159	4,459	4,572	40,570	41,874	3.2
Oct-Dec	9,105		4,483		40,818		
Annual	9,115		18,139		165,336		

<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, 2001-2002 <sup>1</sup>**

Month	Milk Cows <sup>2</sup>		Milk Per Cow <sup>3</sup>		Milk Production <sup>3</sup>		
	2001	2002	2001	2002	2001	2002	Change From 2001
	<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	7,784	7,745	1,549	1,585	12,059	12,272	1.8
Feb	7,764	7,744	1,431	1,468	11,108	11,365	2.3
Mar	7,743	7,744	1,599	1,649	12,384	12,771	3.1
Apr	7,740	7,754	1,571	1,619	12,156	12,555	3.3
May	7,749	7,764	1,632	1,677	12,647	13,021	3.0
Jun	7,751	7,779	1,555	1,583	12,052	12,315	2.2
Jul	7,746	7,783	1,552	1,581	12,025	12,306	2.3
Aug	7,735	7,790	1,520	1,570	11,754	12,232	4.1
Sep	7,730	7,785	1,472	1,498	11,376	11,663	2.5
Oct	7,726	7,792	1,522	1,541	11,756	12,004	2.1
Nov	7,739	7,793	1,485	1,501	11,492	11,697	1.8
Dec	7,750		1,549		12,008		
Annual	7,746		18,438		142,817		

<sup>1</sup> 2002 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, 2001-2002 <sup>1</sup>**

Month	Milk Cows <sup>2</sup>		Milk Per Cow <sup>3</sup>		Milk Production <sup>3</sup>		
	2001	2002	2001	2002	2001	2002	Change From 2001
	<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	9,169	9,110	1,527	1,564	13,998	14,245	1.8
Feb	9,143	9,109	1,410	1,448	12,894	13,190	2.3
Mar	9,117	9,109	1,577	1,627	14,375	14,821	3.1
Apr	9,110	9,129	1,545	1,595	14,078	14,564	3.5
May	9,116	9,145	1,607	1,652	14,646	15,105	3.1
Jun	9,117	9,161	1,531	1,559	13,957	14,285	2.4
Jul	9,109	9,161	1,523	1,553	13,877	14,230	2.5
Aug	9,096	9,162	1,491	1,545	13,564	14,154	4.3
Sep	9,088	9,155	1,445	1,474	13,129	13,490	2.7
Oct	9,086	9,165	1,498	1,518	13,611	13,910	2.2
Nov	9,106	9,167	1,461	1,479	13,305	13,555	1.9
Dec	9,122		1,524		13,902		
Annual	9,115		18,139		165,336		

<sup>1</sup> 2002 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, November 2001-2002**

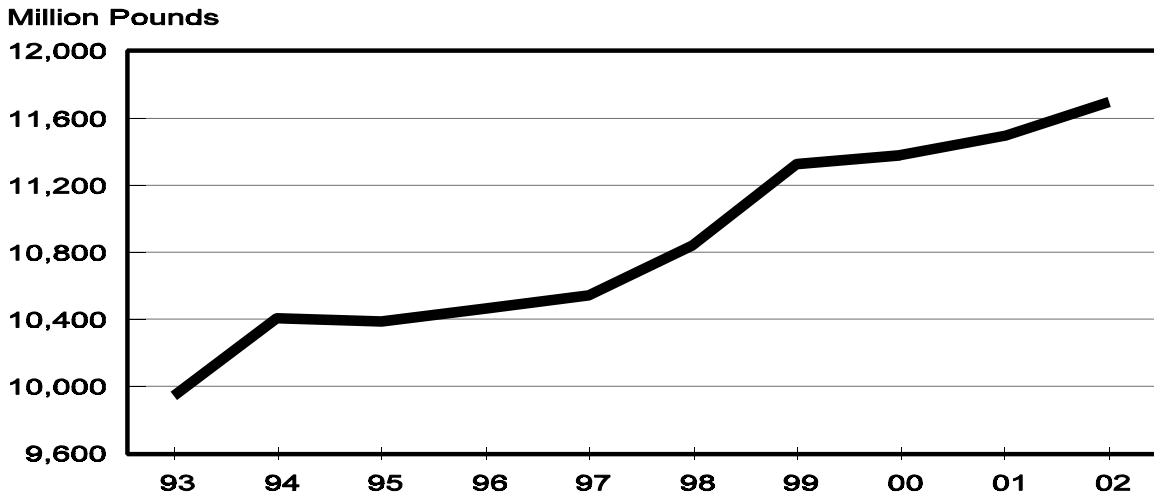
State	Milk Cows <sup>1</sup>		Milk Per Cow <sup>2</sup>		Milk Production <sup>2</sup>		
	2001	2002	2001	2002	2001	2002	Change From 2001
	<i>1,000 Head</i>	<i>1,000 Head</i>	<i>Pounds</i>	<i>Pounds</i>	<i>Million Pounds</i>	<i>Million Pounds</i>	<i>Percent</i>
AZ <sup>3</sup>	140	150	1,660	1,795	232	269	15.9
CA	1,614	1,670	1,685	1,700	2,720	2,839	4.4
FL	152	147	1,170	1,175	178	173	-2.8
ID	372	390	1,730	1,690	644	659	2.3
IL	115	115	1,375	1,420	158	163	3.2
IN	155	148	1,350	1,400	209	207	-1.0
IA	206	208	1,485	1,470	306	306	
KY	125	120	1,050	1,000	131	120	-8.4
MI	301	301	1,575	1,610	474	485	2.3
MN	500	480	1,365	1,350	683	648	-5.1
MO	141	135	1,080	1,110	152	150	-1.3
NM	280	305	1,665	1,650	466	503	7.9
NY	674	675	1,430	1,430	964	965	0.1
OH	256	264	1,370	1,370	351	362	3.1
PA	596	591	1,460	1,460	870	863	-0.8
TX	312	309	1,275	1,350	398	417	4.8
VT	154	153	1,405	1,395	216	213	-1.4
VA	119	119	1,285	1,260	153	150	-2.0
WA	247	247	1,780	1,800	440	445	1.1
WI	1,280	1,266	1,365	1,390	1,747	1,760	0.7
20-State Total	7,739	7,793	1,485	1,501	11,492	11,697	1.8

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

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

<sup>3</sup> Preliminary revisions for Arizona indicate milk production at 250 million pounds for November 2001. This preliminary revision is not included in the 20-State total. Annual revisions will be published in February 2003.

**November Milk Production, 1993-2002  
20 States**



**Milk Cows and Production: By State, October 2001-2002 <sup>1</sup>**

State	Milk Cows <sup>2</sup>		Milk per Cow <sup>3</sup>		Milk Production <sup>3</sup>		
	2001	2002	2001	2002	2001	2002	Change From 2001
	<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 <sup>4</sup>	140	150	1,670	1,745	234	262	12.0
CA	1,609	1,664	1,745	1,760	2,808	2,929	4.3
FL	152	147	1,120	1,110	170	163	-4.1
ID	369	391	1,820	1,760	672	688	2.4
IL	114	115	1,390	1,430	158	164	3.8
IN	154	149	1,375	1,420	212	212	
IA	206	208	1,480	1,480	305	308	1.0
KY	126	120	1,030	1,025	130	123	-5.4
MI	302	300	1,600	1,650	483	495	2.5
MN	500	480	1,395	1,390	698	667	-4.4
MO	141	136	1,085	1,120	153	152	-0.7
NM	273	305	1,750	1,750	478	534	11.7
NY	673	676	1,470	1,490	989	1,007	1.8
OH	257	264	1,380	1,395	355	368	3.7
PA	596	591	1,500	1,495	894	884	-1.1
TX	315	309	1,240	1,350	391	417	6.6
VT	153	153	1,450	1,425	222	218	-1.8
VA	118	119	1,290	1,260	152	150	-1.3
WA	247	247	1,860	1,870	459	462	0.7
WI	1,281	1,268	1,400	1,420	1,793	1,801	0.4
20-State Total	7,726	7,792	1,522	1,541	11,756	12,004	2.1

<sup>1</sup> 2002 revised.

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

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

<sup>4</sup> Preliminary revisions for Arizona indicate milk production at 251 million pounds for October 2001. This preliminary revision is not included in the 20-State total. Annual revisions will be published in February 2003.

**November Milk Cows, 1993-2002  
20 States**



## 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 July-September quarters is 0.9 percent. This means that chances are 2 out of 3 that the final July-September estimate will not be above or below the current estimate of 9.16 million head by more than 0.9 percent. Chances are 9 out of 10 that the difference will not exceed 1.7 percent.

**Reliability of July-September 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> 0.7	<i>Percent</i> 1.2	<i>Million Pounds</i> 502	<i>Million Pounds</i> 226	<i>Million Pounds</i> 34	<i>Million Pounds</i> 380	<i>Number</i> 10	<i>Number</i> 0
All Milk Cows	<i>Percent</i> 0.9	<i>Percent</i> 1.7	<i>1,000 Head</i> 156	<i>1,000 Head</i> 64	<i>1,000 Head</i> 3	<i>1,000 Head</i> 171	<i>Number</i> 8	<i>Number</i> 2

<sup>1</sup> Based on records for the past 10 July-September quarters.

The next "Milk Production" report will be released at 3 p.m. ET on January 17, 2003.

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