

Milk Production



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June Milk Production Up 1 Percent

Milk production in the 21 major States during June totaled 11.0 billion pounds.

1 percent above production in these same States in June 1992. May revised production, at 11.4 billion pounds was 1 percent more than May 1992.

Production per cow in the 21 major States averaged 1,352 pounds for June, 31 pounds above June 1992.

The number of cows on farms in the 21 major States was 8.14 million head, 107,000 below June 1992 and 5,000 below May 1993.

During the April-June period, the 21 major States produced 33.4 billion pounds of milk, 84.4 percent of the U.S. production. If the remaining 29 states not surveyed monthly followed the same pattern as the 21 States, the U.S. production would be 13.0 billion for April, 13.6 billion pounds for May, and 13.0 billion for June.

April-June Milk Production Up 1 percent

The quarterly production of milk for the U.S. was 39.6 billion pounds, 1 percent above the April-June period last year. The average number of milk cows in the U.S. during the April-june quarter was 9.74 million head, 103,000 less than the same period last year.

Grain and Other Concentrates Fed

Grain and other concentrates fed to milk cows on July 1 1993, averaged 17.6 pounds per cow, unchanged from July 1, 1992.

Value of Grain and Other Concentrates

The value of grain and other concentrates fed to cows on July 1, averaged \$7.71 per hundredweight, \$0.11 less than the July 1, 1992 price.

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	9,738	3,971	4,064	39,077	39,573	101
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, May 1992-93 1/

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	1,157	1,164	1,650	1,695	1,909	1,973	103
FL	182	177	1,320	1,315	240	233	97
ID	184	188	1,490	1,460	274	274	100
IL	187	178	1,220	1,310	228	233	102
IN	144	144	1,425	1,410	205	203	99
IA	307	305	1,160	1,210	356	369	104
KY	182	180	1,045	1,100	190	198	104
MD	98	100	1,295	1,250	127	125	98
MI	338	340	1,370	1,410	463	479	103
MN	660	650	1,320	1,370	871	891	102
MO	228	225	1,205	1,250	275	281	102
NY	740	744	1,395	1,390	1,032	1,034	100
NC	97	95	1,340	1,395	130	133	102
OH	329	311	1,275	1,350	419	420	100
PA	651	644	1,410	1,420	918	914	100
TN	194	190	1,000	1,000	194	190	98
TX	376	385	1,330	1,395	500	537	107
VT	163	164	1,350	1,355	220	222	101
VA	137	132	1,285	1,320	176	174	99
WA	249	257	1,685	1,690	420	434	103
WI	1,647	1,575	1,295	1,350	2,133	2,126	100
21 State: Total	8,250	8,148	1,367	1,404	11,280	11,443	101

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	8,143	1,321	1,352	10,897	11,008	101
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, June 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	1,156	1,166	1,610	1,645	1,861	1,918	103
FL	182	177	1,135	1,175	207	208	100
ID	186	188	1,460	1,440	272	271	100
IL	185	178	1,200	1,280	222	228	103
IN	145	145	1,335	1,360	194	197	102
IA	307	305	1,140	1,190	350	363	104
KY	181	178	945	1,005	171	179	105
MD	98	100	1,205	1,200	118	120	102
MI	339	340	1,350	1,360	458	462	101
MN	660	650	1,280	1,320	845	858	102
MO	229	230	1,100	1,178	252	271	108
NY	745	742	1,340	1,340	998	994	100
NC	96	94	1,215	1,245	117	117	100
OH	329	310	1,230	1,280	405	397	98
PA	650	647	1,340	1,355	871	877	101
TN	192	185	960	980	184	181	98
TX	375	385	1,200	1,260	450	485	108
VT	163	164	1,315	1,325	214	217	101
VA	136	132	1,185	1,205	161	159	99
WA	251	257	1,625	1,625	408	418	102
WI	1,645	1,570	1,300	1,330	2,139	2,088	98
21 State: Total	8,250	8,143	1,321	1,352	10,897	11,008	101

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 January-March, 1992-93

State	Jan-Mar Milk Cows <u>1/</u>		Jan-Mar Milk Production <u>2/</u>		1993 as % of 1992
	1992	1993	1992	1993	
	----- 1,000	-----	Million Pounds		Percent
AL	42	39	142	142	100
AK	0.7	0.7	2.82	2.77	98
AZ	97	98	476	461	97
AR	65	64	202	196	97
CA	1,159	1,161	5,367	5,422	101
CO	79	80	342	354	104
CT	33	35	138	132	96
DE	9.2	9.8	35.9	34.3	96
FL	181	179	721	715	99
GA	104	100	418	420	100
HI	10.7	10.9	37.6	36.1	96
ID	176	184	718	743	103
IL	186	179	680	669	98
IN	144	143	576	540	94
IA	302	305	1,068	1,083	101
KS	93	84	315	285	90
KY	184	183	545	533	98
LA	80	80	268	264	99
ME	41	41	160	161	101
MD	99	101	370	357	96
MA	30	30	121	121	100
MI	338	340	1,339	1,350	101
MN	668	658	2,545	2,531	99
MS	60	60	209	209	100
MO	225	225	745	744	100
MT	23	23	81	78	96
NE	98	96	305	307	101
NV	20	20.0	87	86.0	99
NH	21	21	86	85	99
NJ	25	25	92	95	103
NM	104	127	506	590	117
NY	748	748	2,922	2,841	97
NC	98	96	401	396	99
ND	78	73	246	237	96
OH	329	313	1,176	1,180	100
OK	95	95	304	309	102
OR	100	100	408	420	103
PA	664	652	2,641	2,521	95
RI	2.2	2.3	8.8	7.7	88
SC	31	28	113	106	94
SD	131	127	410	398	97
TN	195	190	529	515	97
TX	376	381	1,455	1,515	104
UT	81	81	317	321	101
VT	163	165	633	619	98
VA	139	133	536	523	98
WA	242	252	1,161	1,205	104
WV	23	23	69	69	100
WI	1,660	1,607	5,934	5,810	98
WY	8.3	7.4	26.4	24.0	91
US <u>3/</u>	9.863	9.777	37.989	37.763	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.

Milk Cows and Production: By State and United States
Preliminary April-June, 1992-93

State	Apr-Jun Milk Cows <u>1/</u>		Apr-Jun Milk Production <u>2/</u>		1993 as % of 1992
	1992	1993	1992	1993	
	----- 1,000 -----		Million Pounds		Percent
AL	40	39	129	135	105
AK	0.7	0.7	3.21	3.16	98
AZ	98	102	464	500	108
AR	65	64	207	204	99
CA	1,157	1,164	5,611	5,791	103
CO	80	80	360	370	103
CT	34	34	139	134	96
DE	9.1	10.0	35.5	34.2	96
FL	182	177	686	675	98
GA	101	100	392	400	102
HI	11.0	11.0	39.7	38.5	97
ID	183	187	799	800	100
IL	186	178	666	687	103
IN	144	144	593	589	99
IA	307	305	1,058	1,089	103
KS	90	83	315	280	89
KY	182	179	545	567	104
LA	80	81	252	255	101
ME	41	42	167	180	108
MD	98	100	369	364	99
MA	30	30	122	123	101
MI	338	340	1,364	1,397	102
MN	660	650	2,558	2,601	102
MS	59	60	199	205	103
MO	228	227	791	829	105
MT	23	23	84	83	99
NE	97	95	312	314	101
NV	20.0	20.0	90.0	88.0	98
NH	21	21	86	89	103
NJ	25	25	91	96	105
NM	108	131	551	634	115
NY	743	745	3,018	3,008	100
NC	97	95	378	382	101
ND	79	70	261	242	93
OH	329	311	1,220	1,215	100
OK	98	98	319	319	100
OR	102	100	442	465	105
PA	652	646	2,688	2,661	99
RI	2.3	2.4	9.1	8.9	98
SC	30	28	98	95	97
SD	131	126	440	426	97
TN	194	188	569	559	98
TX	376	384	1,450	1,554	107
UT	83	83	345	348	101
VT	163	164	647	650	100
VA	137	132	512	506	99
WA	249	257	1,228	1,269	103
WV	23	23	70	70	100
WI	1,649	1,575	6,277	6,214	99
WY	7.9	7.4	27.5	25.8	94
US <u>3/</u>	9,841	9,738	39,077	39,573	101

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, July 1, 1992-93

State	Grain and Other Concentrates Fed Daily per Milk Cow		Value per 100 Pounds of Concentrate Ration Fed to Milk Cows	
	1992	1993	1992	1993
	Pounds		Dollars	
AL	18.9	17.4	8.50	8.10
AK	18.0	19.0	13.00	13.50
AZ	21.7	21.0	6.80	7.10
AR	18.4	18.0	8.30	7.90
CA	19.5	19.5	7.40	7.35
CO	25.5	20.0	7.05	6.80
CT	16.1	16.3	8.60	8.40
DE	16.2	14.9	8.23	8.30
FL	26.0	26.0	7.10	7.00
GA	21.4	20.7	7.95	7.70
ID	19.0	21.0	6.70	6.50
IL	17.0	17.0	8.40	7.80
IN	17.3	17.0	7.40	7.50
IA	16.3	17.0	7.05	6.30
KS	20.0	19.2	7.75	7.30
KY	16.2	16.3	8.40	8.00
LA	17.0	17.0	8.35	8.20
ME	16.3	15.0	8.50	8.50
MD	16.5	16.5	8.75	8.90
MA	12.2	14.7	8.60	9.00
MI	17.0	16.6	7.10	6.95
MN	16.9	17.3	7.60	7.30
MS	17.6	17.4	8.10	7.90
MO	17.0	17.5	7.55	7.55
MT	16.0	17.3	6.95	7.55
NE	16.0	16.2	6.90	6.90
NV	21.0	20.0	8.90	7.60
NH	14.5	16.6	8.60	8.50
NJ	13.5	13.7	9.50	8.90
NM	24.0	25.0	6.30	6.30
NY	14.7	14.5	9.00	9.00
NC	16.8	17.4	8.60	8.80
ND	16.2	16.0	5.70	6.05
OH	16.2	16.0	8.40	8.10
OK	17.6	18.3	7.85	7.85
OR	16.0	18.0	8.65	8.60
PA	14.5	16.7	8.98	9.10
RI	15.8	13.3	9.30	7.80
SC	17.0	17.5	8.00	8.05
SD	15.4	16.0	6.40	6.40
TN	15.0	16.0	9.00	9.00
TX	21.5	22.3	7.50	7.40
UT	18.5	17.3	7.40	7.10
VT	15.4	14.3	8.90	8.60
VA	16.2	16.3	9.20	9.00
WA	20.0	20.5	7.75	7.95
WV	14.2	14.9	8.90	8.90
WI	16.9	16.0	7.50	7.40
WY	12.7	11.7	6.40	6.75
US	17.6	17.6	7.82	7.71

Grain and Other Concentrates: Quantity Fed Annually and Value
by State and United States, 1991 ^{1/}

State	Annual Quantity Fed to Milk Cows			Annual Average Value of Concentrate	Annual Average Concentrate Value
	Total	Per Cow	Per Cwt of Milk	Per Cwt	per Cwt of Milk
	-- 1,000 Tons --		Pounds	----- Dollars -----	
AL	133	6.480	51	8.50	4.32
AK	3	6.250	47	13.10	6.11
AZ	394	8.290	46	7.19	3.30
AR	233	6.660	57	7.90	4.48
CA	4,176	7.230	39	7.66	2.96
CO	301	7.800	45	7.00	3.16
CT	97	5.860	37	8.80	3.22
DE	26	5.510	39	8.30	3.23
FL	853	9.470	68	7.29	4.94
GA	405	7.570	56	8.08	4.56
ID	555	6.230	38	6.58	2.53
IL	563	5.890	40	8.06	3.23
IN	469	6.330	41	7.61	3.12
IA	830	5.480	40	7.35	2.91
KS	314	6.470	51	7.41	3.80
KY	526	5.390	48	8.49	4.07
LA	252	6.300	54	8.16	4.37
ME	115	5.470	37	8.91	3.33
MD	270	5.240	38	8.62	3.31
MA	82	5.250	35	8.93	3.15
MI	1,052	6.170	40	6.80	2.70
MN	2,005	5.870	41	7.16	2.90
MS	177	5.810	48	8.20	3.96
MO	702	6.210	49	7.52	3.71
MT	68	5.640	41	6.99	2.84
NE	275	5.500	43	6.70	2.90
NV	79	8.130	46	7.88	3.63
NH	57	5.720	36	8.93	3.18
NJ	62	4.960	35	9.15	3.20
NM	460	9.390	48	6.52	3.11
NY	1,902	5.030	34	9.00	3.08
NC	313	6.320	41	8.84	3.64
ND	228	5.550	44	5.53	2.41
OH	1,033	6.130	44	8.14	3.57
OK	324	6.550	53	7.38	3.89
OR	291	5.810	35	8.92	3.14
PA	1,820	5.440	36	9.01	3.20
RI	7	5.680	38	8.91	3.35
SC	93	5.650	46	8.24	3.83
SD	377	5.540	45	6.24	2.80
TN	513	5.290	47	9.04	4.29
TX	1,490	7.840	55	7.56	4.14
UT	240	6.070	38	7.00	2.68
VT	422	5.140	35	8.97	3.18
VA	368	5.260	36	8.90	3.25
WA	848	7.150	38	8.00	3.07
WV	56	4.810	41	8.90	3.69
WI	5,057	5.900	42	7.20	3.00
WY	18	4.020	32	6.30	2.04
US	30,934	6.192	41.7	7.73	3.22

^{1/} Estimates for all places where milk produced, either for sale or for home use.

Grain and Other Concentrates: Quantity Fed Annually and Value
by State and United States, 1992 ^{1/}

State	Annual Quantity Fed to Milk Cows			Annual Average Value of Concentrate	Annual Average Concentrate Value
	Total	Per Cow	Per Cwt of Milk	Per Cwt	per Cwt of Milk
	-- 1,000 Tons --		Pounds	----- Dollars -----	
AL	129	6.260	51	8.42	4.26
AK	3	7.150	41	13.10	5.38
AZ	403	8.210	45	6.92	3.12
AR	209	6.420	53	7.96	4.22
CA	4,088	7.060	37	7.33	2.74
CO	354	8.850	50	6.76	3.36
CT	98	5.730	36	8.79	3.17
DE	29	6.090	40	8.19	3.30
FL	787	8.690	61	7.14	4.38
GA	403	7.890	53	7.97	4.22
ID	643	7.030	41	6.56	2.71
IL	550	5.940	41	7.93	3.27
IN	461	6.400	40	7.51	3.02
IA	834	5.470	39	7.17	2.81
KS	299	6.720	49	7.58	3.74
KY	516	5.610	48	8.38	4.01
LA	255	6.360	53	8.27	4.39
ME	117	5.710	36	8.90	3.20
MD	274	5.540	38	8.73	3.31
MA	84	5.590	35	8.93	3.14
MI	1,026	6.050	38	7.06	2.68
MN	1,871	5.670	38	7.30	2.78
MS	174	5.800	46	8.08	3.69
MO	701	6.170	47	7.50	3.50
MT	66	5.690	40	7.12	2.84
NE	265	5.450	43	6.92	2.99
NV	80	7.940	45	7.98	3.56
NH	57	5.380	34	8.82	3.04
NJ	61	4.870	33	9.19	3.00
NM	521	9.390	48	6.22	3.00
NY	1,910	5.100	33	9.04	3.00
NC	310	6.390	41	8.69	3.54
ND	228	5.830	46	5.57	2.57
OH	961	5.930	41	8.18	3.34
OK	302	6.280	49	7.62	3.74
OR	300	5.870	35	8.68	3.07
PA	1,815	5.540	35	9.00	3.12
RI	7	5.790	40	9.05	3.61
SC	89	5.910	45	8.14	3.70
SD	349	5.360	42	6.28	2.67
TN	512	5.330	47	8.98	4.19
TX	1,482	7.880	53	7.52	3.95
UT	249	6.070	37	7.16	2.68
VT	427	5.200	34	8.86	2.99
VA	369	5.380	36	9.00	3.26
WA	919	7.380	38	7.83	2.95
WV	54	4.710	39	8.88	3.46
WI	4,823	5.860	40	7.23	2.86
WY	17	4.350	33	6.24	2.09
US	30,481	6,197	40.2	7.68	3.09

^{1/} Estimates for all places where milk produced, either for sale or for home use.

Milk Cows: Percent of Operations by Size Group, Selected States, and United States, 1991-92 1/

State	Operations Having:							
	1-29 Head		30-49 Head		50-99 Head		100+ Head	
	1991	1992	1991	1992	1991	1992	1991	1992
Percent								
CA	38.1	38.1	2.8	2.8	6.7	6.7	52.4	52.4
FL	67.0	68.0	<u>2/</u>	<u>2/</u>	<u>2/</u>	<u>2/</u>	33.0	32.0
ID	42.1	41.6	14.2	14.7	21.6	20.0	22.1	23.7
IL	23.3	23.0	23.3	23.0	40.0	40.0	13.4	14.0
IN	58.3	60.0	16.1	15.6	19.6	17.7	6.0	6.7
IA	34.3	33.3	28.6	30.3	30.0	28.8	7.1	7.6
KY	47.3	49.0	25.4	20.8	20.0	21.9	7.3	8.3
MD	26.2	25.0	18.8	17.9	35.0	35.0	20.0	22.1
MI	28.3	27.3	26.7	25.4	28.3	29.1	16.7	18.2
MN	25.3	25.0	40.0	39.3	30.0	30.0	4.7	5.7
MO	56.0	54.7	14.7	16.0	24.0	24.0	5.3	5.3
NY	20.5	22.0	23.8	22.0	41.0	40.0	14.7	16.0
NC	47.3	35.8	8.0	7.5	18.0	22.5	26.7	34.2
OH	49.4	47.7	20.2	22.1	23.6	24.4	6.8	5.8
PA	29.6	27.8	33.1	32.9	29.0	30.7	8.3	8.6
TN	55.0	50.0	11.5	12.9	23.0	22.1	10.5	15.0
TX	62.5	60.0	4.0	3.5	10.9	10.2	22.6	26.3
VT	15.4	12.0	23.1	24.0	42.3	44.0	19.2	20.0
VA	53.2	49.0	8.0	8.4	21.3	23.0	17.5	19.6
WA	55.0	56.7	4.0	3.3	18.0	15.0	23.0	25.0
WI	23.4	22.9	36.3	35.2	33.1	34.2	7.2	7.7
Oth	59.0	58.5	11.6	11.3	17.5	18.0	11.9	12.2
US	39.8	38.8	22.8	22.5	25.9	26.3	11.5	12.4

1/ An operation is any place having one or more milk cows on hand during the Year. Percents reflect average distributions of various probability surveys conducted during the year but are based primarily on end-of-year surveys.

2/ Combined with other size groups.

Milk Cows: Percent of Inventory by Size Group, Selected States, and United States, 1991-92 1/

State	Inventory on Operations Having:							
	1-29 Head		30-49 Head		50-99 Head		100+ Head	
	1991	1992	1991	1992	1991	1992	1991	1992
Percent								
CA	0.2	0.2	0.4	0.4	1.6	1.7	97.8	97.7
FL	0.7	0.6	<u>2/</u>	<u>2/</u>	<u>2/</u>	<u>2/</u>	99.3	99.4
ID	3.9	2.2	6.2	6.5	16.3	13.5	73.6	77.8
IL	3.2	3.8	16.9	16.1	48.7	48.9	31.2	31.2
IN	15.9	16.0	17.2	17.5	40.7	35.0	26.2	31.5
IA	12.5	11.2	23.1	25.9	42.9	41.3	21.5	21.6
KY	8.9	8.9	25.3	21.6	36.8	38.4	29.0	31.1
MD	4.8	5.0	11.4	11.0	36.2	34.0	47.6	50.0
MI	5.3	4.7	16.3	14.1	34.0	33.8	44.4	47.4
MN	9.9	9.5	35.3	32.9	40.7	40.9	14.1	16.7
MO	9.1	8.7	18.2	19.1	49.1	48.3	23.6	23.9
NY	3.3	3.7	15.0	13.2	42.4	41.1	39.3	42.0
NC	1.7	0.7	5.4	3.4	20.4	19.8	72.5	76.1
OH	15.2	14.3	17.6	19.1	41.5	42.2	25.7	24.4
PA	7.6	7.1	26.7	25.4	41.2	42.2	24.5	25.3
TN	10.3	7.9	9.2	10.0	32.8	29.5	47.7	52.6
TX	1.3	1.1	2.1	1.8	11.0	10.8	85.6	86.3
VT	1.8	1.8	12.3	12.0	42.9	41.9	43.0	44.3
VA	5.4	3.3	6.0	5.6	30.0	29.6	58.6	61.5
WA	2.6	2.0	1.6	1.6	14.7	11.9	81.1	84.5
WI	8.4	7.7	29.4	28.7	42.3	42.5	19.9	21.1
Oth	7.0	6.8	12.5	12.4	31.0	31.1	49.5	49.7
US	6.3	5.9	16.6	15.9	31.7	31.2	45.4	47.0

1/ Percents reflect average distributions of various probability surveys conducted during the year but are based primarily on end-of-year surveys.
2/ Combined with other size groups.

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 9.74 million head by more than 0.5 percent, or about 49,000 head. Chances are 9 out of 10 that the difference will not exceed 0.8 percent, or about 78,000 head (the 90 percent confidence level).

Reliability of April-June 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	0.6	1.1	435	-40	0	-394	5	4
			----- 1,000 Head -----					
All Milk Cows	0.5	0.8	78	-34	-1	-94	9	1

1/ Based on records for the past 10 April-June quarters.

The next "Milk Production" report will be released at 3 p.m. ET on August 16, 1993.

