## 2003 Milk Production

U.S. milk production during 2003 increased $0.1 \%$ compared with 2002, climbing to a record 170.3 billion pounds. The 2003 total is 249 million pounds greater than the previous record of 170.1 billion pounds produced during 2002. Milk production has exceeded year earlier levels during six of the last seven years, with the lone exception occurring during 2001. Production in the U.S. has increased by 13.0 billion pounds over the past five years (2003 versus 1998), a gain of $8.2 \%$.

Fifteen states registered annual milk production increases during 2003, with the percentage increases averaging 3.4\%. Indiana recorded the largest percentage gain, with milk production increasing by $10.8 \%$ compared with the previous year. Idaho $(+7.6 \%)$, Texas $(+6.2 \%)$, and New Mexico ( $+5.5 \%$ ) were the only other states that registered annual milk production increases of $5.0 \%$ or more. Conversely, 20 states reported annual decreases of $5.0 \%$ or more, with Wyoming's $14.8 \%$ decrease being the largest milk production loss. Other states posting declines of more than $10.0 \%$ were South Carolina (-12.6\%), Mississippi (-11.5), Arkansas (-10.4\%), and Louisiana (-10.4\%). In total, thirty-five states posted production decreases, with the percentage decreases averaging -6.2\%.

> 2003 Milk Production Ranking Top Ten States Highlighted


The map on this page ranks milk production by state for 2003, with the top ten milk producing states shaded. The graphics on page 4 depict the states with the largest percentage increases and decreases in milk production comparing 2003 with 1998.
${ }_{4}^{2} 49$ Nineteen states recorded milk production 46 increases comparing 282003 with 1998. The average percentage increase for these states was $21.5 \%$, with eight states posted increases larger than the 19-state percentage average. These eight were Kansas (+60.8\%), New Mexico (+53.1\%), Idaho (+52.2\%), Oregon (+37.5\%), Indiana (+34.4\%), Colorado (+28.9\%), Arizona (+28.9\%), and California (+28.1\%). The only other states to post double digit increases compared with 1998 were Montana (+18.9\%), Michigan (+18.6\%), and Alaska (+16.5\%).

Thirty-one states recorded production decreases between 1998 and 2003, with an average percentage decline of $16.5 \%$. Sixteen of these states recorded decreases greater than the average percentage loss. These were:

| Arkansas | $-34.8 \%$ | Alabama | $-34.7 \%$ | Rhode Island | $-33.3 \%$ | Wyoming | $-32.3 \%$ |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| Louisiana | $-30.9 \%$ | Hawaii | $-28.7 \%$ | Mississippi | $-26.9 \%$ | New Jersey | $-26.0 \%$ |
| Massachusetts $-24.2 \%$ | Connecticut | $-21.9 \%$ | North Dakota | $-21.5 \%$ | Missouri | $-20.3 \%$ |  |
| West Virginia | $-20.1 \%$ | Tennessee | $-19.7 \%$ | Delaware | $-16.6 \%$ | North Carolina | $-16.6 \%$ |



The graph at the right depicts annual milk production since 1990 for the nation's top five milk producing states. Idaho ( $+7.6 \%$ ), California ( $+1.1 \%$ ) and Wisconsin $(+0.9 \%)$ posted increases during 2003 compared with the previous year, while New York (-2.2\%) and Pennsylvania (-4.1\%) registered production losses. California was the only state to record a production increase each year during this period-increasing production by 69.2\% compared with 1990, while Idaho (+197.5\%) posted the largest percentage gain. New York ( $+8.0 \%$ ) and Pennsylvania (+4.1\%) also posted increases compared with 1990, while Wisconsin (-8.7\%) recorded the lone decrease in milk production during this time period.

The map on page 6 provides a ranking of states based on 2003 milk production per cow. California, Idaho, Michigan, New Mexico, and Washington are the only states ranked in the top ten in both total milk production and production per cow. Idaho ( $21,718 \mathrm{lbs} . / c o w$ ) and California (20,993 lbs./cow) were the only top five states with production per cow above the 2003 national average of 18,749 pounds.

## 2003 Per Capita Milk Production

Per capita milk production is a data series presented annually in this Bulletin. A comparison of this series to per capita consumption data may reflect the aggregate supply and demand balance for individual states and regions throughout the U.S. The table on page 7 details and compares per capita milk production by state for 2003, 2002, and 1998. This table lists the states in descending order based on 2003 per capita production. The states with per capita production of more than 600 pounds are inside the shaded area of the table. Six of the top ten states in total production are also in the top ten in per capita production. These six are California, Idaho, Minnesota, New Mexico, Washington, and Wisconsin.

Data used in these calculations indicates that per capita production for 2003 was down 4.9 pounds ( $-0.8 \%$ ) compared with 2002. Eleven states reported annual per capita increases during 2003, the largest being Indiana with a gain of $10.1 \%$. Idaho, with an increase of $5.8 \%$, was the only other state with an increase of five percent or greater. Wyoming recorded the largest per capita production decline during 2003, with a loss of $15.2 \%$. Twenty-two additional states recorded decreases of five percent or more compared with 2002. South Carolina (-13.6\%), Mississippi (-12.0\%), Arkansas (-11.1\%), Louisiana (-10.8\%), and Delaware ($10.6 \%$ ) were other states with double-digit per capita production percentage decreases.

Per capita production for the U.S. increased by 3.4 pounds, or $+0.6 \%$, between 1998 and 2003. Fourteen states recorded increases in per capita milk production, led by Kansas's gain of $55.8 \%$. New Mexico (+41.6\%), Idaho (+37.1\%), Indiana (+28.2\%), Oregon (+26.8\%), California (+18.0\%), Michigan (+15.5\%), Montana (+14.0\%), Colorado (+12.4\%), and Alaska (+10.5\%), and were the other states to post per capita increases of ten percent or more comparing 2003 with 1998. Arkansas, Rhode Island, and Alabama recorded the largest decreases, with per capita production falling by $39.3,38.8$, and $36.9 \%$, respectively. Fifteen additional states posted declines of more than $20 \%$, while 10 states reported decreases between 10 and $20 \%$.

The map on the top of page 3 depicts per capita milk production by state for 2003. The 300 and 600 pound levels of per capita production are arbitrary divisions selected for this map. These levels reflect average annual fluid and total per capita dairy consumption, plus reserve requirements. A cursory analysis of regional milk supply conditions can be performed by examining the shading patterns prevalent in the individual regions.

The map at the bottom of page 3 displays the percentage change in per capita milk production by state between 1998 and 2003. The data represented by this map reflects changes in production combined with population changes. The graphics on page 5 depict the states with the largest percentage increases and decreases from 1998 to 2003.

The graph on page 6 provides a ranking of the top five milk producing states in total milk production, production per cow, and production per capita. The graph on the last page of this Bulletin depicts milk production per capita for the U.S. over the last 24 years.

Percentage 2003 U.S. Totals

|  | U.S. Milk <br> Production | U.S. <br> Population <br> Estimate |
| :--- | :---: | :---: |
| California | 20.81 | 12.20 |
| Wisconsin | 13.07 | 1.88 |
| New York | 7.02 | 6.60 |
| Pennsylvania | 6.07 | 4.25 |
| Idaho | 5.15 | 0.47 |
| 5-State Total | $\mathbf{5 2 . 1 2}$ | $\mathbf{2 5 . 4 0}$ |

## 2003 Per Capita Milk Production



## Percent Change In Per Capita Milk Production 2003 vs 1998




## Largest Production Decreases



## Per Capita Milk Production: 2003 vs 1998

U.S. Average = +0.6\%

## Largest Per Capita Increases



## Largest Per Capita Decreases



## 2003 Milk Production: Top Five States

State Rankings


## 2003 Milk Production Per Cow Ranking Top Ten States Highlighted



Page 6

# Per Capita Milk Production 

## 2003 versus 2002 \& 1998 - By State

|  | States | Per Capita Milk Production |  |  | Change In Per Capita Milk Production |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | 2003 | 2002 | 1998 | $\begin{aligned} & 2003 \\ & \text { Pounds } \end{aligned}$ | $\begin{aligned} & \text { s } 2002 \\ & \text { Percent } \end{aligned}$ | $\begin{array}{r} 2003 \\ \text { Pounds } \end{array}$ | $31998$ <br> Percent |
| 1 | Idaho | 6,421.6 | 6,071.7 | 4,683.5 | 349.9 | 5.8 | 1,738.1 | 37.1 |
| 2 | Vermont | 4,259.4 | 4,385.1 | 4,487.1 | -125.7 | -2.9 | -227.8 | -5.1 |
| 3 | Wisconsin | 4,068.9 | 4,058.0 | 4,374.1 | 10.9 | 0.3 | -305.2 | -7.0 |
| 4 | New Mexico | 3,555.9 | 3,410.3 | 2,511.6 | 145.6 | 4.3 | 1,044.3 | 41.6 |
| 5 | South Dakota | 1,733.6 | 1,695.1 | 1,963.6 | 38.5 | 2.3 | -230.0 | -11.7 |
| 6 | Minnesota | 1,632.2 | 1,683.3 | 1,962.4 | -51.0 | -3.0 | -330.2 | -16.8 |
| 7 | lowa | 1,283.9 | 1,295.7 | 1,332.0 | -11.8 | -0.9 | -48.1 | -3.6 |
| 8 | California | 998.7 | 1,001.8 | 846.1 | -3.1 | -0.3 | 152.5 | 18.0 |
| 9 | Washington | 910.2 | 926.3 | 936.4 | -16.1 | -1.7 | -26.2 | -2.8 |
| 10 | North Dakota | 874.0 | 935.5 | 1,106.9 | -61.4 | -6.6 | -232.9 | -21.0 |
| 11 | Pennsylvania | 836.0 | 874.0 | 903.7 | -37.9 | -4.3 | -67.7 | -7.5 |
| 12 | Kansas | 776.6 | 748.6 | 498.4 | 28.0 | 3.7 | 278.2 | 55.8 |
| 13 | Utah | 686.8 | 718.5 | 720.3 | -31.7 | -4.4 | -33.5 | -4.6 |
| 14 | Nebraska | 649.1 | 675.5 | 632.2 | -26.4 | -3.9 | 16.9 | 2.7 |
| 15 | Michigan | 631.0 | 609.4 | 546.3 | 21.6 | 3.5 | 84.6 | 15.5 |
| 16 | New York | 622.8 | 638.5 | 647.1 | -15.7 | -2.5 | -24.2 | -3.7 |
| 17 | Arizona | 618.9 | 630.4 | 574.2 | -11.5 | -1.8 | 44.7 | 7.8 |
| 18 | Oregon | 611.6 | 594.5 | 482.3 | 17.0 | 2.9 | 129.3 | 26.8 |
| 19 | Colorado | 478.4 | 479.7 | 425.6 | -1.3 | -0.3 | 52.8 | 12.4 |
| 20 | Maine | 477.9 | 506.6 | 545.1 | -28.7 | -5.7 | -67.2 | -12.3 |
| 21 | Indiana | 475.2 | 431.7 | 370.7 | 43.5 | 10.1 | 104.5 | 28.2 |
| 22 | Ohio | 392.6 | 392.2 | 392.4 | 0.4 | 0.1 | 0.2 | 0.1 |
| 23 | Montana | 377.1 | 374.6 | 330.9 | 2.5 | 0.7 | 46.2 | 14.0 |
| 24 | Oklahoma | 373.6 | 374.5 | 370.1 | -0.9 | -0.2 | 3.5 | 0.9 |
| 25 | Kentucky | 355.5 | 394.6 | 434.6 | -39.1 | -9.9 | -79.1 | -18.2 |
| 26 | Missouri | 330.6 | 343.2 | 435.3 | -12.6 | -3.7 | -104.7 | -24.0 |
| 27 | Texas | 254.5 | 243.8 | 284.3 | 10.7 | 4.4 | -29.8 | -10.5 |
| 28 | New Hampshire | 236.9 | 257.4 | 280.8 | -20.5 | -8.0 | -44.0 | -15.7 |
| 29 | Virginia | 234.4 | 259.5 | 271.2 | -25.1 | -9.7 | -36.8 | -13.6 |
| 30 | Maryland | 223.6 | 238.7 | 261.2 | -15.1 | -6.3 | -37.6 | -14.4 |
| 31 | Nevada | 216.4 | 231.1 | 287.9 | -14.7 | -6.4 | -71.5 | -24.8 |
| 32 | Tennessee | 206.3 | 227.1 | 276.3 | -20.8 | -9.2 | -70.0 | -25.3 |
| 33 | Delaware | 166.4 | 186.1 | 219.1 | -19.8 | -10.6 | -52.7 | -24.1 |
| 34 | Georgia | 166.3 | 172.1 | 188.2 | -5.8 | -3.4 | -21.9 | -11.6 |
| 35 | 1 llinois | 161.8 | 163.0 | 175.7 | -1.2 | -0.7 | -14.0 | -7.9 |
| 36 | Mississippi | 146.8 | 166.7 | 210.4 | -19.9 | -12.0 | -63.6 | -30.2 |
| 37 | Arkansas | 129.1 | 145.2 | 212.7 | -16.1 | -11.1 | -83.6 | -39.3 |
| 38 | Florida | 127.0 | 138.3 | 156.8 | -11.3 | -8.2 | -29.8 | -19.0 |
| 39 | North Carolina | 124.2 | 136.9 | 165.8 | -12.7 | -9.3 | -41.6 | -25.1 |
| 40 | West Virginia | 122.6 | 134.6 | 153.4 | -12.0 | -8.9 | -30.8 | -20.1 |
| 41 | Connecticut | 118.6 | 129.2 | 161.6 | -10.7 | -8.3 | -43.1 | -26.7 |
| 42 | Louisiana | 115.4 | 129.4 | 172.1 | -13.9 | -10.8 | -56.7 | -32.9 |
| 43 | Wyoming | 107.7 | 127.1 | 166.2 | -19.4 | -15.2 | -58.5 | -35.2 |
| 44 | South Carolina | 76.7 | 88.7 | 97.4 | -12.0 | -13.6 | -20.7 | -21.3 |
| 45 | Hawaii | 73.2 | 78.0 | 108.4 | -4.9 | -6.2 | -35.2 | -32.5 |
| 46 | Alabama | 56.0 | 61.8 | 88.7 | -5.9 | -9.5 | -32.7 | -36.9 |
| 47 | Massachusetts | 51.6 | 56.2 | 71.3 | -4.6 | -8.2 | -19.7 | -27.6 |
| 48 | Alaska | 25.7 | 27.6 | 23.3 | -1.8 | -6.6 | 2.4 | 10.5 |
| 49 | New Jersey | 25.0 | 27.5 | 36.1 | -2.5 | -9.1 | -11.1 | -30.7 |
| 50 | Rhode Island | 20.4 | 21.4 | 33.4 | -1.0 | -4.6 | -13.0 | -38.8 |
|  | U.S. Totals | 585.6 | 590.5 | 582.2 | -4.9 | -0.8 | 3.4 | 0.6 |


|  | Statistical Uniform Price |  | Producer Price Differential |  | Class I Utilization |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | 12/2003 | 1/2004 | 12/2003 | 1/2004 | 12/2003 | 1/2004 |
| Pacific Northwest | 12.47 | 12.07 | 0.60 | 0.46 | 29.66 | 30.14 |
| Western | 12.65 | 12.13 | 0.78 | 0.52 | 22.12 | 20.71 |
| Arizona-Las Vegas | 12.98 | 12.39 | ----- | ----- | 32.96 | 32.19 |
| Central | 12.91 | 12.30 | 1.04 | 0.69 | 30.37 | 30.35 |
| Southwest | 13.86 | 13.29 | 1.99 | 1.68 | 41.68 | 45.26 |
| Upper Midwest | 12.41 | 11.98 | 0.54 | 0.37 | 18.11 | 17.76 |
| Southeast | 15.33 | 14.02 | ----- | ----- | 64.66 | 62.88 |
| Mideast | 13.26 | 12.51 | 1.39 | 0.90 | 38.58 | 38.60 |
| Appalachian | 15.48 | 14.25 | --- | --- | 69.19 | 69.07 |
| Northeast | 14.39 | 13.58 | 2.52 | 1.97 | 46.59 | 47.39 |
| Florida | 17.16 | 15.54 | ----- | ----- | 86.78 | 86.61 |



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