Extension Livestock Outlook: Dairy and Trade

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Total U.S. Milk Production: 50% increase in 30 years

Source: USDA, NASS
Increase in Output per Cow More Than Offset Declining Number of Milk Cows

Farm Milk is produced in every state, but most of the growth in milk production is occurring in the West.
## Top Ten Milk Producing States

<table>
<thead>
<tr>
<th>Rank</th>
<th>State</th>
<th>2006 Prod. (bil lbs)</th>
<th>1975 Rank</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>California</td>
<td>38.8</td>
<td>2</td>
</tr>
<tr>
<td>2</td>
<td>Wisconsin</td>
<td>23.4</td>
<td>1</td>
</tr>
<tr>
<td>3</td>
<td>New York</td>
<td>12.0</td>
<td>3</td>
</tr>
<tr>
<td>4</td>
<td>Idaho</td>
<td>10.9</td>
<td>19</td>
</tr>
<tr>
<td>5</td>
<td>Pennsylvania</td>
<td>10.7</td>
<td>5</td>
</tr>
<tr>
<td>6</td>
<td>Minnesota</td>
<td>8.4</td>
<td>4</td>
</tr>
<tr>
<td>7</td>
<td>New Mexico</td>
<td>7.6</td>
<td>42</td>
</tr>
<tr>
<td>8</td>
<td>Texas</td>
<td>7.2</td>
<td>8</td>
</tr>
<tr>
<td>9</td>
<td>Michigan</td>
<td>7.1</td>
<td>6</td>
</tr>
<tr>
<td>10</td>
<td>Washington</td>
<td>5.5</td>
<td>11</td>
</tr>
</tbody>
</table>

Source: USDA, NASS

## Ten Fastest Growing Dairy States, percent change 1980 - 2006

<table>
<thead>
<tr>
<th>State</th>
<th>Percent Change</th>
</tr>
</thead>
<tbody>
<tr>
<td>New Mexico</td>
<td>1,169%</td>
</tr>
<tr>
<td>Idaho</td>
<td>460%</td>
</tr>
<tr>
<td>Arizona</td>
<td>284%</td>
</tr>
<tr>
<td>Colorado</td>
<td>197%</td>
</tr>
<tr>
<td>California</td>
<td>186%</td>
</tr>
<tr>
<td>Nevada</td>
<td>154%</td>
</tr>
<tr>
<td>Texas</td>
<td>97%</td>
</tr>
<tr>
<td>Oregon</td>
<td>92%</td>
</tr>
<tr>
<td>Washington</td>
<td>86%</td>
</tr>
<tr>
<td>Kansas</td>
<td>76%</td>
</tr>
</tbody>
</table>

Source: USDA, NASS
More than 50% of U.S. Milk Production Comes from the 4% of Herds with 500+ Cows

Since 1980, the average milk production per farm increased 488% while the number of operations with milk cows in the U.S. has declined by 77%
Number of Cheese Plants and Annual Average Volume per Plant, 1940-Present

Number of Butter Plants and Annual Average Volume per Plant, 1940-Present

Source: USDA, NASS

AAEA Extension Dairy Outlook, Portland OR, July 30, 2007
U.S. Farm Production and Commercial Use of Solids Nonfat

Source: USDA, ERS

Accounting for 2006 Component Use

<table>
<thead>
<tr>
<th></th>
<th>Milkfat</th>
<th>Skim Solids</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Supply</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Farm Marketings</td>
<td>6,662</td>
<td>15,642</td>
<td>22,304</td>
</tr>
<tr>
<td>Beginning Stocks</td>
<td>294</td>
<td>769</td>
<td>1,063</td>
</tr>
<tr>
<td>Imports</td>
<td>167</td>
<td>408</td>
<td>575</td>
</tr>
<tr>
<td>Total Supply</td>
<td>7,123</td>
<td>16,819</td>
<td>23,942</td>
</tr>
<tr>
<td>Use</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ending Stocks</td>
<td>351</td>
<td>785</td>
<td>1,136</td>
</tr>
<tr>
<td>USDA Net Removals</td>
<td>0</td>
<td>62</td>
<td>62</td>
</tr>
<tr>
<td>Comm. Disappearance</td>
<td>6,772</td>
<td>15,972</td>
<td>22,744</td>
</tr>
</tbody>
</table>

Source: USDA, ERS
Percent of U.S. Milk Production by Product End Use Category

- On Farm: 1960
- Fluid & Cultured: 1970
- Cheese: 1980
- Butter/NFDM: 1990
- Frozen dairy: 2000
- Other: 2006

Source: USDA, NASS

Estimated $90 Bil. Retail Value for the U.S. Dairy Industry

- Cheese: 33% $29.6B
- Frozen Desserts: 16% $14.3B
- Dry Milk Products: 6% $5.2B
- Fluid Dairy & Dairy Beverage: 37% $34B
- Cultured Products: 6% $5.2B

Source: IDFA estimates
Estimated Dairy Market Value Shares by Channel

Foodservice 41%
Industrial 10%
Retail 49%

Market Value Shares by Dairy Product

Fluid
Cultured
Butter
Cheese
Dry
Frozen

Source: IDFA estimates
Milk Production Continues to Grow While Fluid Use Does Not

Per Capita Consumption of Fluid Milks in Long Term Decline
Per Capita Consumption of Frozen Dairy Products – Uneven Trend

Thanks To Yogurt, Per Capita Consumption of Cultured Products Up
Per Capita Cheese Consumption Growing, Mostly for Non-American Types

Source: USDA, ERS

Per Capita Consumption of Dry Products – Uneven Trend

Source: USDA, ERS

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US Dairy Exports, Imports and Dairy Trade Balance (volume)

Source: USDA, FAS

Share of Advertising Voice – All Beverages

Source: Information Resources, Inc.
Retail Advertising Spending per Gallon

Source: Ad Spending from Nielsen AdViews courtesy of Lowe Worldwide and Total volume estimates from Beverage Marketing Corp.

Retail Milk Price and Volume Changes

Data Source: Information Resources, Inc.
Retail Volume and Price of Organic Milk

Source: Information Resources, Inc.

Consumer Perceptions of "Organic"

Have you ever purchased any organic milk?

- Yes: 20%
- No: 80%

N=809

Why do you purchase organic milk?

- Better Taste: 6.5%
- Experimentation/wanted to try: 8.1%
- More humane way to produce milk: 8.1%
- Worry about non-organic impact on children: 10.6%
- Generally seen as Healthier: 22.8%
- Worry about chemicals/hormones: 37.4%

Have you heard anyone talking about organic milk and dairy products being better than non-organic dairy products?

- Yes: 34%
- No: 66%

N=809

Source: Milk PEP
Retail Cheese Price and Volume Changes

Source: IDFA Cheese Market Research Project

Retail Ice Cream Price and Volume Changes

Source: IDFA Cultured and Ice Cream Products report
Age Group Shares of Population

Age Group Percentages in US Population

- under 10
- 10 to 19
- 20 to 34
- 35 to 49
- 50's
- 60 and older

Source: US Bureau of Census

Population Growth by Ethnicity

- Total
- White
- Black
- Am. Indian/Alaska Native
- Asian
- Nat. Hawaiian/Pac. Isle
- Two or More Ethnicities

Source: US Bureau of Census
Household and Family Size Changes

Source: US Bureau of Census

Changes in Monthly Milk Production

Source: USDA, NASS
Monthly Total US Milk Production

Monthly Average All-Milk Price

Source: USDA, NASS
Monthly All Milk Price

Source: USDA, NASS

Announced Class III Prices and CME Futures Prices, 2007 & 2008

Source: USDA & CME
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