



MINNESOTA

DAIRY INDUSTRY PROFILE



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MINNESOTA DAIRY INDUSTRY

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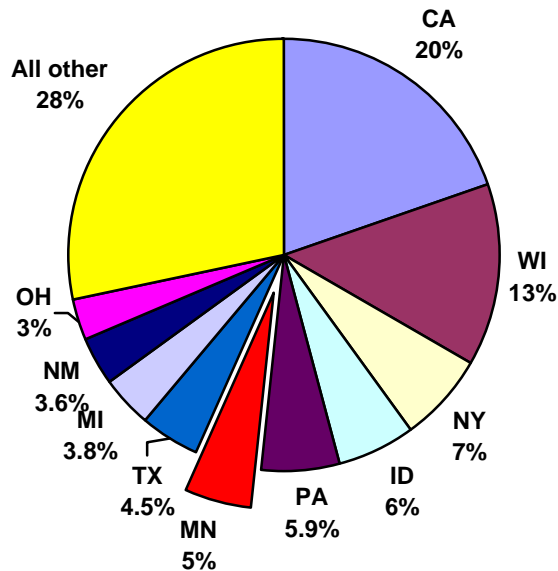


MINNESOTA DAIRY INDUSTRY

National Ranking

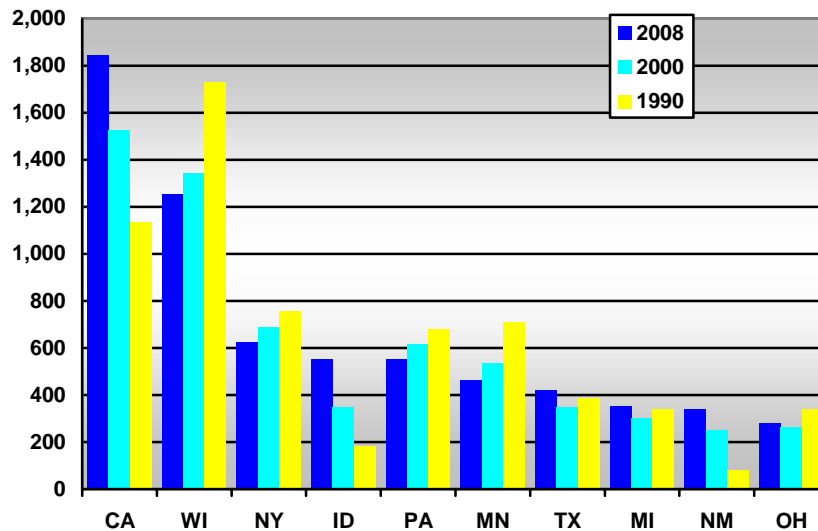
- Minnesota is the 6th largest dairy state in the U.S.
- In 2008, Minnesota had 464,000 head of dairy cows, about 5% of the U.S. total.
- Many large dairy states have seen decreases in cow numbers in the past decades; Minnesota, however, has achieved increases in cow numbers from 2005 to 2008, a four-year consecutive growth after long periods of decline.

U.S. Top 10 Dairy States (2008) – Number of Dairy Cows



Source: USDA, NASS

U.S. Top 10 Dairy States (2008) – 1,000 Head



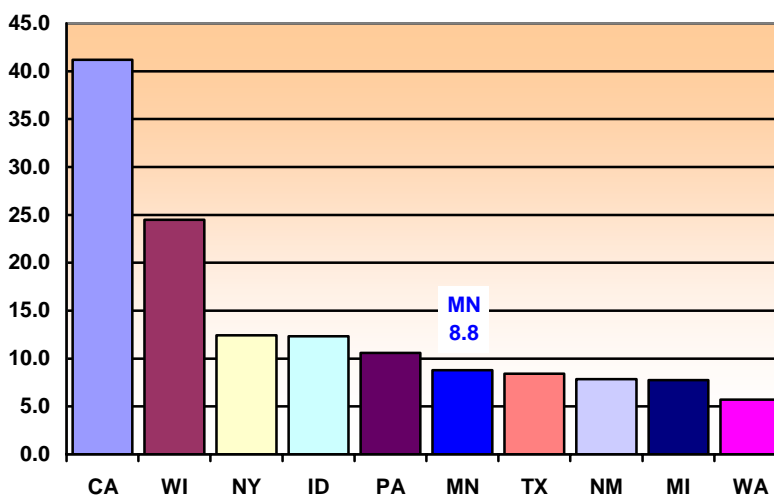
Source: USDA, NASS

MINNESOTA DAIRY INDUSTRY

Production Trend

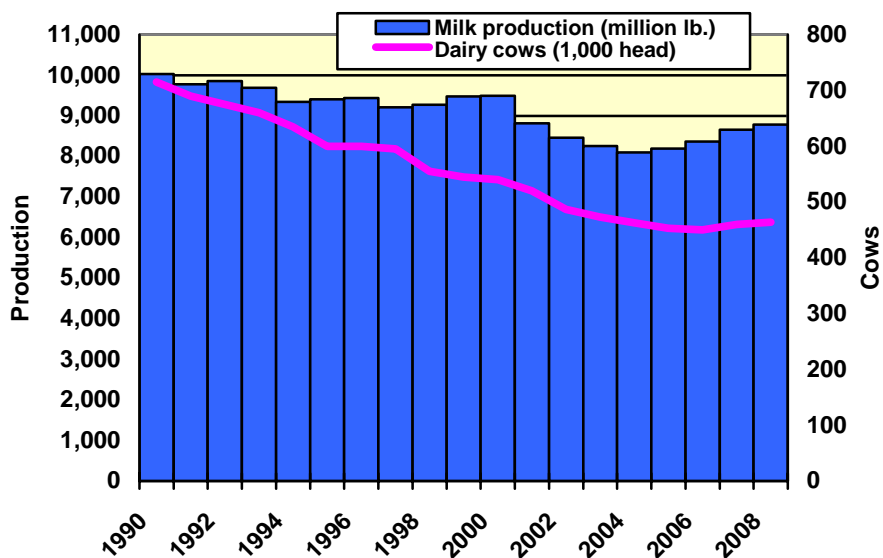
- Minnesota produced 8.8 billion pounds of milk in 2008, a slight increase from the previous year.
- After years of decline, the past four years have seen an annual production growth averaging 2%.
- From 1990 to 2008, milk production in Minnesota decreased by 12% while dairy cow numbers decreased by 35%.

U.S. Top 10 Milk Producing States (2008) – Billion Pounds



Source: USDA, NASS

Minnesota Dairy Production and Dairy Cows (1990-2008)



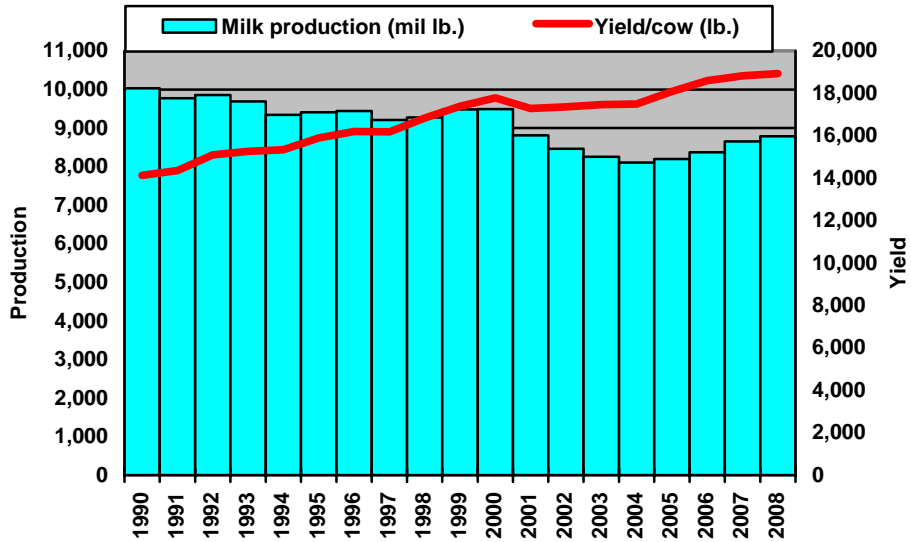
Source: USDA, NASS

MINNESOTA DAIRY INDUSTRY

Milk Yield

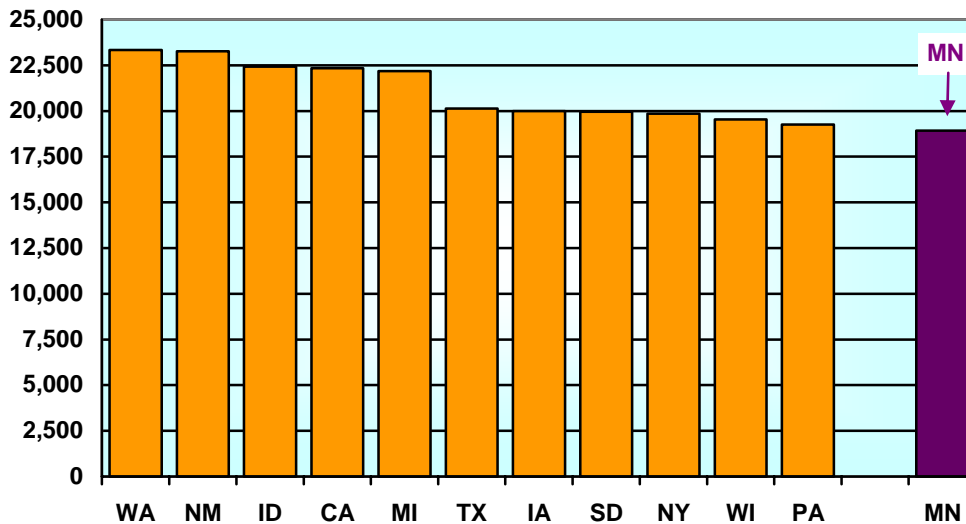
- In Minnesota, milk yield per cow increased by 34% from 1990 to 2008, from 14,000 pounds to 19,000 pounds.
- Minnesota ranks No. 22 in milk yield among U.S. dairy states.

Minnesota Milk Production and Yield (1990-2008)



Source: USDA, NASS

U.S. Top States: Milk Yield (2008) - Pounds



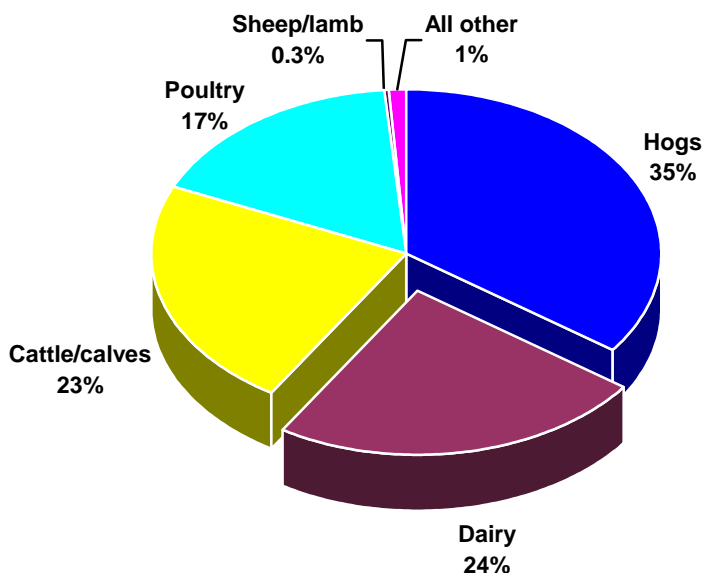
Source: USDA, NASS

MINNESOTA DAIRY INDUSTRY

Cash Receipts

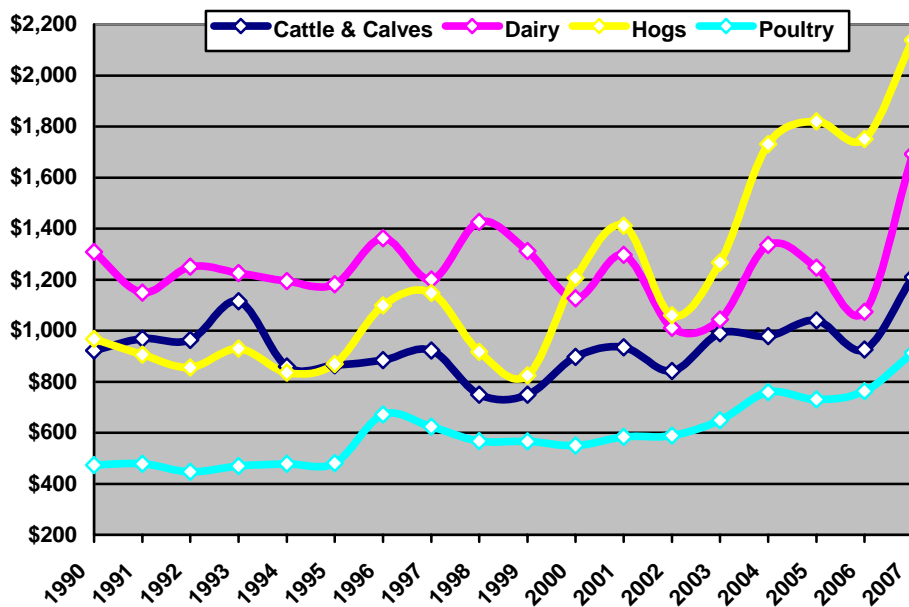
- Dairy is Minnesota's second largest livestock sector (after hogs), contributing 24% of the state's total livestock cash receipts.
- Dairy's cash receipts increased 58% from 2006 to 2007, from \$1.1 billion to \$1.7 billion – the biggest annual increase in the past three decades, due to historical high milk prices in 2007.

Minnesota Livestock Cash Receipts by Sector (2007)



Source: USDA, NASS

Minnesota Livestock Cash Receipts (1990-2007) – Million \$



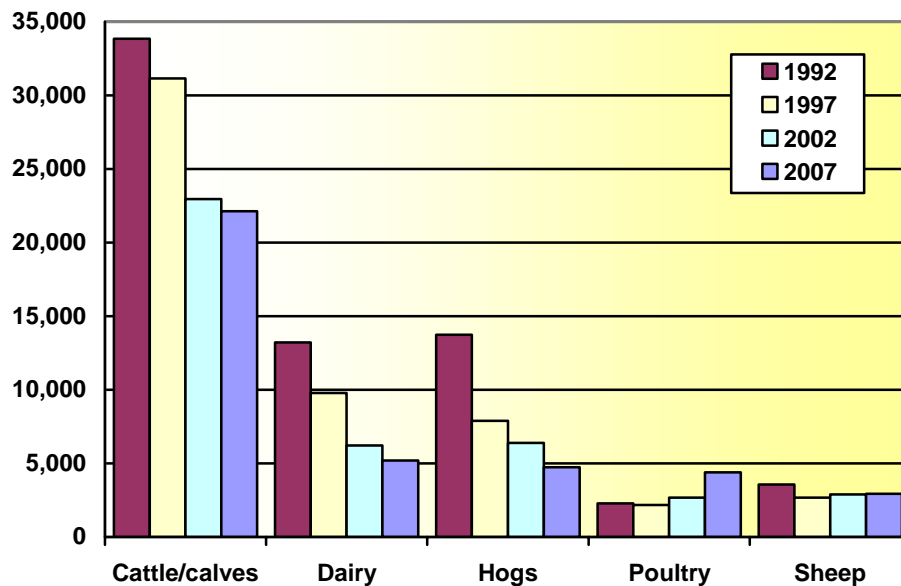
Source: USDA, NASS

MINNESOTA DAIRY INDUSTRY

Farm Numbers

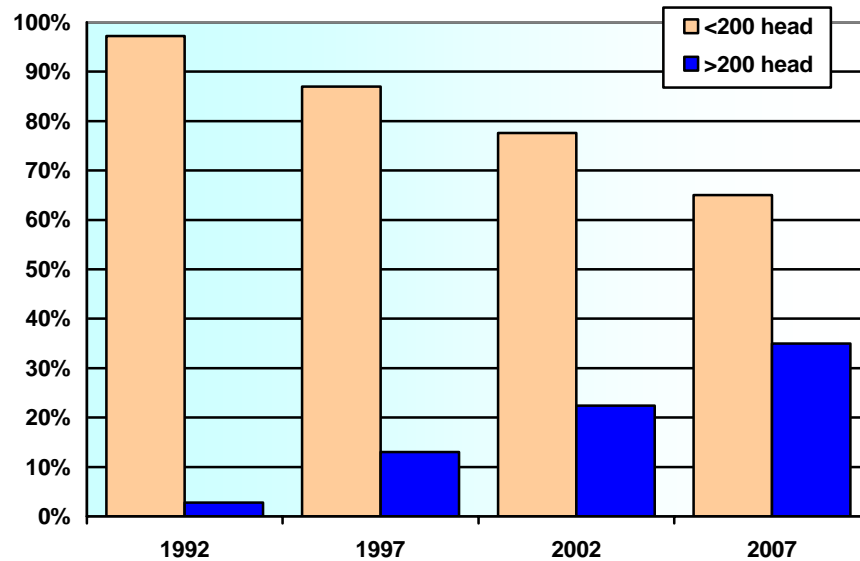
- Farms numbers are decreasing in Minnesota, and livestock and dairy farms are no exception.
- Minnesota has fewer dairy farms today than a decade ago.
- Due to industry consolidation, the average size of dairy farms also increased, from less than 50 cows per farm in 1990 to 90 cows per farm in 2007.

Minnesota Livestock Farms: Change in Numbers



Source: USDA-Ag Census

Minnesota Dairy Cow Inventory by Farm Size (% inventory)



Source: Ag Census

MINNESOTA DAIRY INDUSTRY

County Ranking

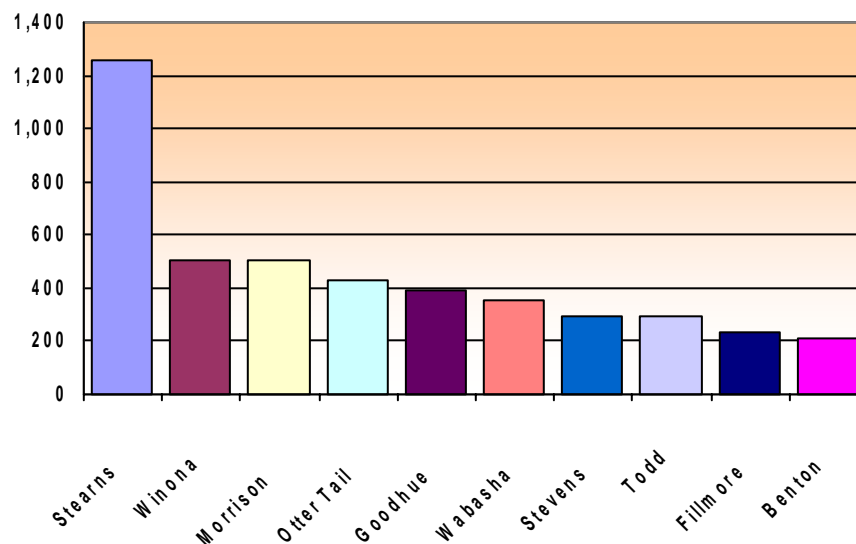
- Stearns County is the largest dairy county in Minnesota, followed by Winona, Morrison, Otter Tail, and Goodhue.
- Among the top 10 dairy counties, Stearns, Morrison, and Stevens are the three counties with increased production from 2000 to 2007. The others had production declines.

Minnesota Top Dairy Counties – 2007 (Million Pounds)

2007 Rank	County	2007	2006	2005	2000	2000-2007 Change	2000 Rank
1	Stearns	1,257	1,205	1154.5	1,154	9%	1
2	Winona	508	489	478	521	-2%	3
3	Morrison	502	486	479	483	4%	4
4	Otter Tail	426	410	408.5	528	-19%	2
5	Goodhue	388	382	377	467	-17%	5
6	Wabasha	354	337	325	379	-7%	6
7	Stevens	295	200	151	43	586%	47
8	Todd	290	296	294	357	-19%	7
9	Fillmore	233	221	218	269	-13%	8
10	Benton	210	213	209	244	-14%	11
	All other counties	4,193	4,125	4,101	5,051	-17%	
	State total	8,656	8,364	8,195	9,493	-9%	

Source: USDA, NASS

Top 10 Counties: Milk Production (1,000 lb.)

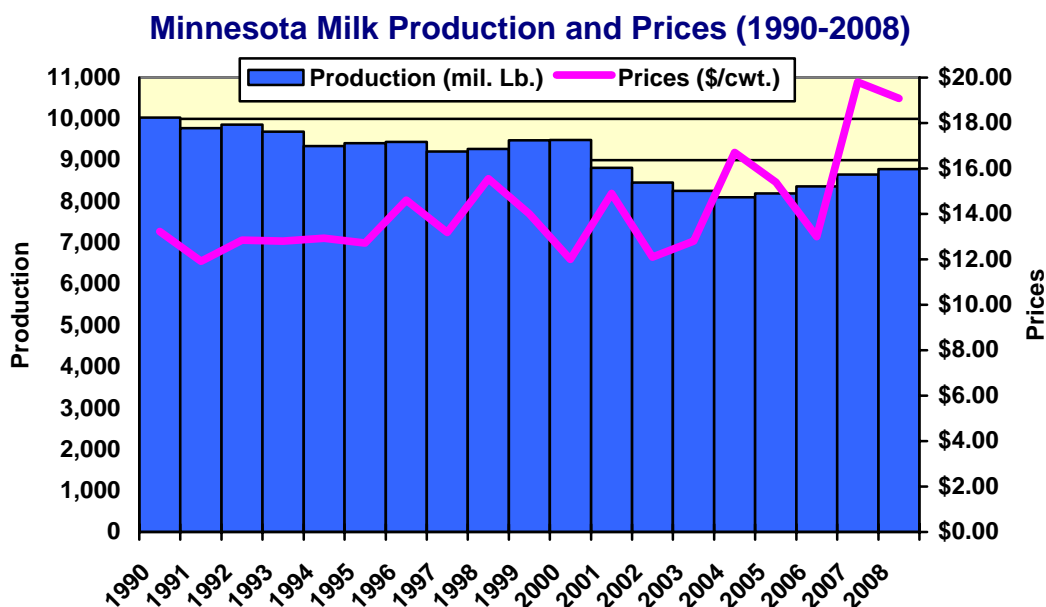


Source: USDA, NASS

MINNESOTA DAIRY INDUSTRY

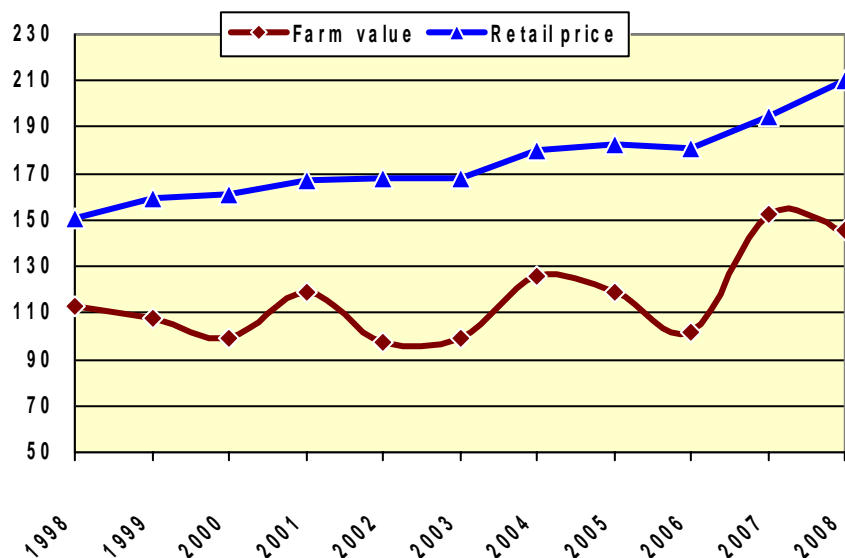
Prices

- In 2008, milk prices received by Minnesota growers averaged \$19.08/cwt., a second historical high.
- However, milk prices saw significant declines in early 2009, averaging \$12.60/cwt. in the first four months – the lowest level since 2002.
- Farm-retail price spreads show more fluctuations in farm-gate value than retail value.



Source: USDA, NASS

Dairy Prices: Farm-Retail Spread - 1998-2008 (1982-84=100)



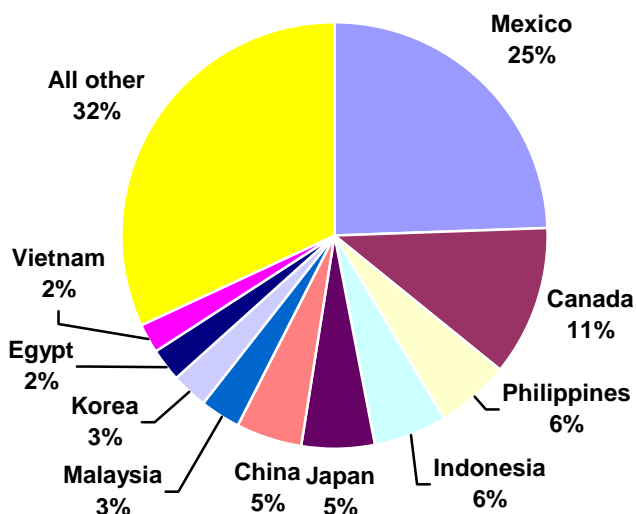
Source: USDA, ERS

MINNESOTA DAIRY INDUSTRY

Export

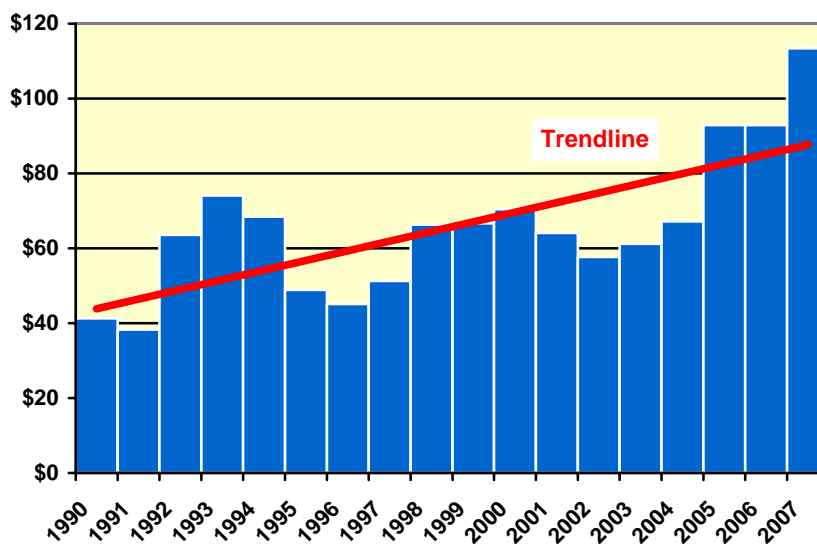
- Minnesota is the fifth largest dairy exporter among all U.S. states.
- In 2007, Minnesota exported \$113 million dairy products, up from \$93 million in 2006, a 22% increase.
- Minnesota's dairy export products include dry and condensed milk (80%), cheese (15%), and butter (6%).
- Mexico is Minnesota's largest dairy export market, followed by Canada.

MN Largest Dairy Export Markets (2008)



Source: USDA-BICO

Minnesota Dairy Export Trend (Million \$)



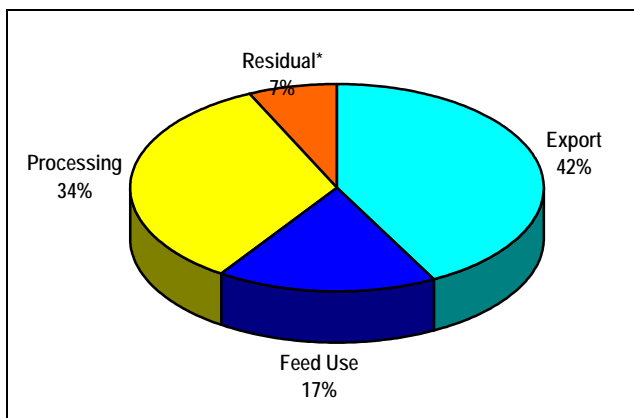
Source: USDA, NASS

MINNESOTA DAIRY INDUSTRY

Feed Use by Dairy Production

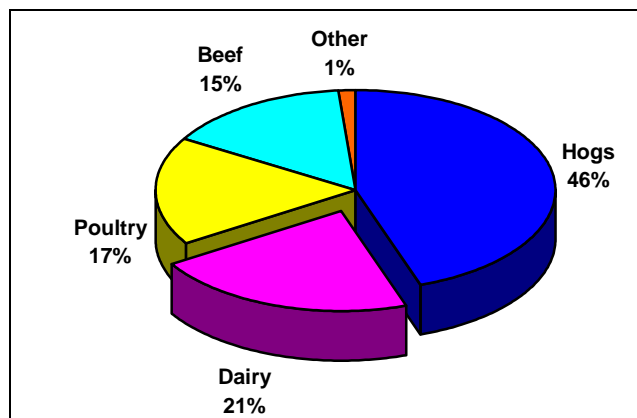
- Dairy production supports crop farming through feed utilization, a significant market for Minnesota's corn and soybean crops.
- In 2008, dairy production consumed 44 million bushels of corn, about 4% of Minnesota's total corn crop.
- Dairy production also consumed 141,600 tons of soybean meal in 2008, about 15% of total soybean meal fed to all livestock.
- Dairy cows are the second largest feed users of corn and third largest feed users of soybean meal in Minnesota.

MN Corn Utilization (2008)



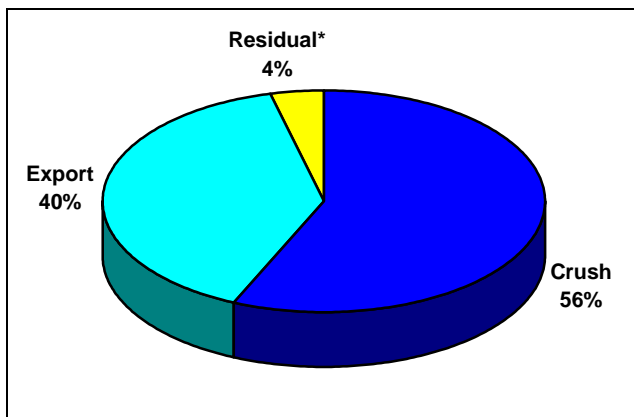
*Residual: all other uses

Corn: Feed Use by Dairy (2008)



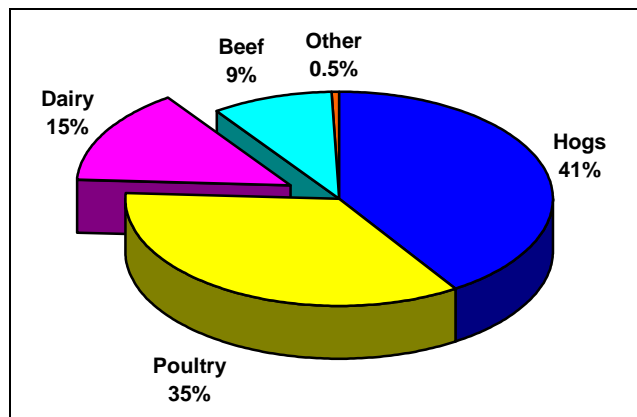
Source: PRX and MDA/AMS

MN Soybean Utilization (2008)



*Residual: all other uses

Soybean Meal: Feed Use by Dairy (2008)



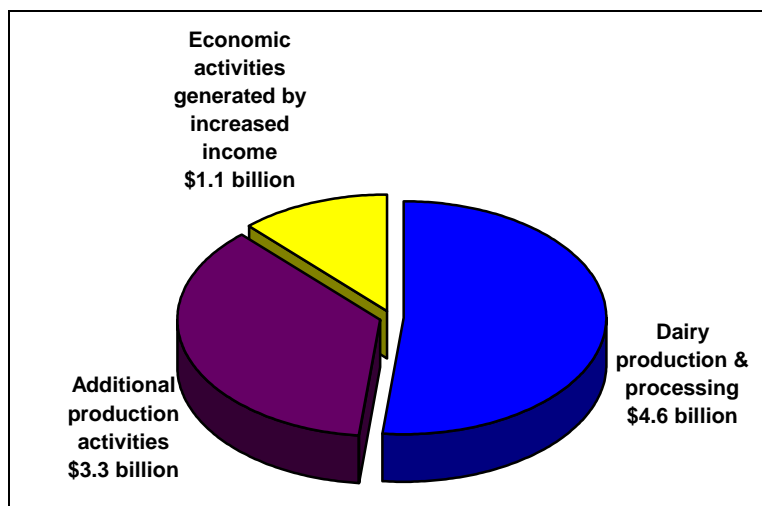
Source: PRX and MDA/AMS

MINNESOTA DAIRY INDUSTRY

Economic Impact

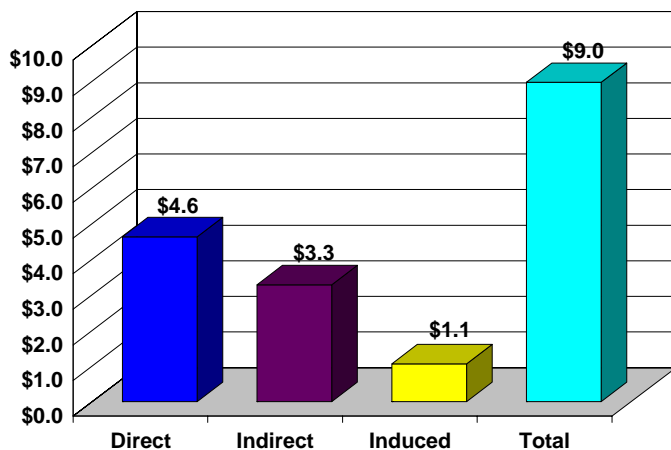
- Minnesota's dairy industry includes both dairy production and processing, with a combined total annual output value of \$4.6 billion.
- Every dollar from dairy production and processing generates about \$2 in state-wide economic activities.
- The multiplier effect of Minnesota's dairy industry to the state economy:
 - Total economic output: \$8.96 billion
 - Total employment: 39,085 jobs.

Output Impact of Dairy Production & Processing: \$8.96 billion

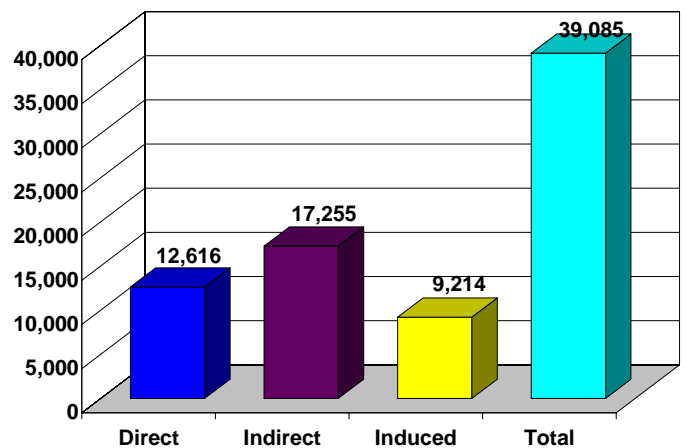


Source: MDA/AMS

Output Impact (Billion \$)



Employment Impact (# of jobs)



Source: MDA/AMS

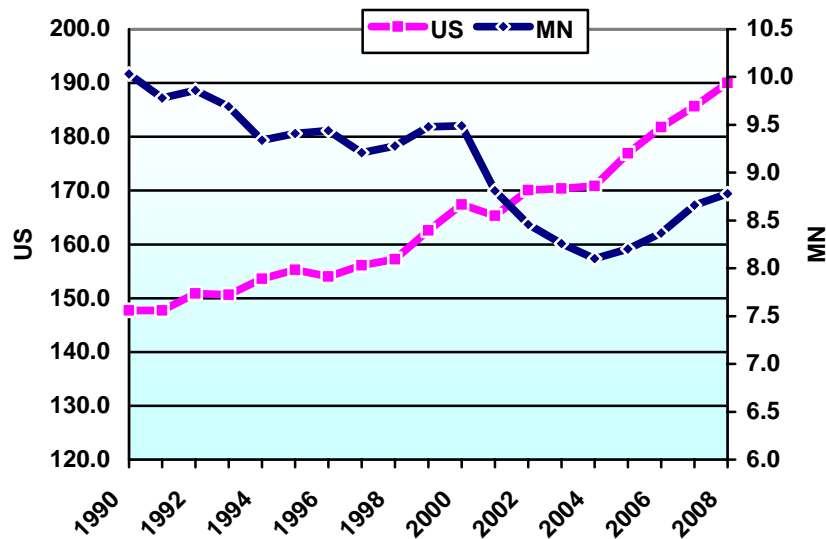
Note: Economic impacts include Direct, Indirect, and Induced impacts. **Direct Impact** represents hog production at farm-level. **Indirect Impact** represents the production activities of all other economic sectors related to hog production. **Induced Impact** represents the additional economic activities generated by the expenditures of new income from the direct and indirect impacts. **Total Impact** is the sum of direct, indirect and induced impacts.

U.S. DAIRY INDUSTRY

Production Trend

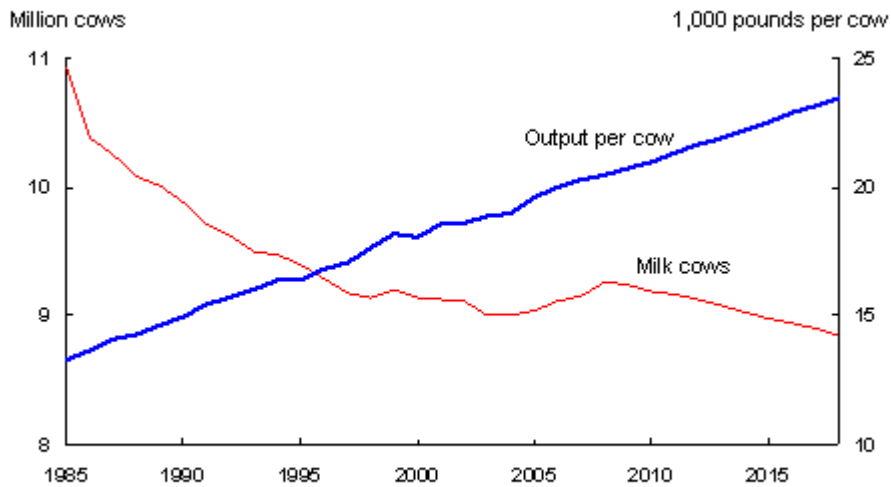
- U.S. production increased by 29% from 1990 to 2008, to a record-high of 190 billion pounds.
- U.S. dairy cow numbers decreased by 7% during the same time.
- In the long term, milk yield per cow is projected to continuously increase while cow numbers will decrease.

U.S. and Minnesota Milk Production Trends (Billion Pounds)



Source: USDA, NASS

U.S. dairy herd and milk production per cow



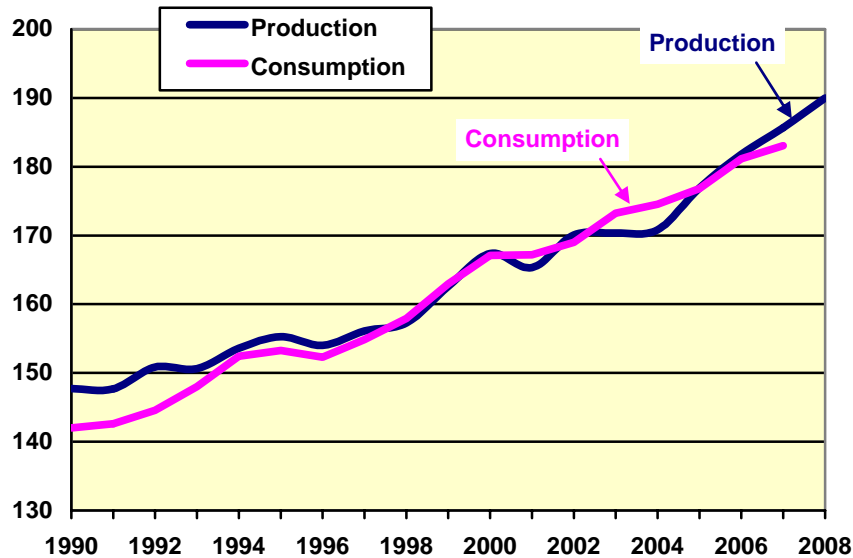
Source: USDA Agricultural Projections to 2018, February 2009.
USDA, Economic Research Service.

U.S. DAIRY INDUSTRY

U.S. Dairy Consumption Trend

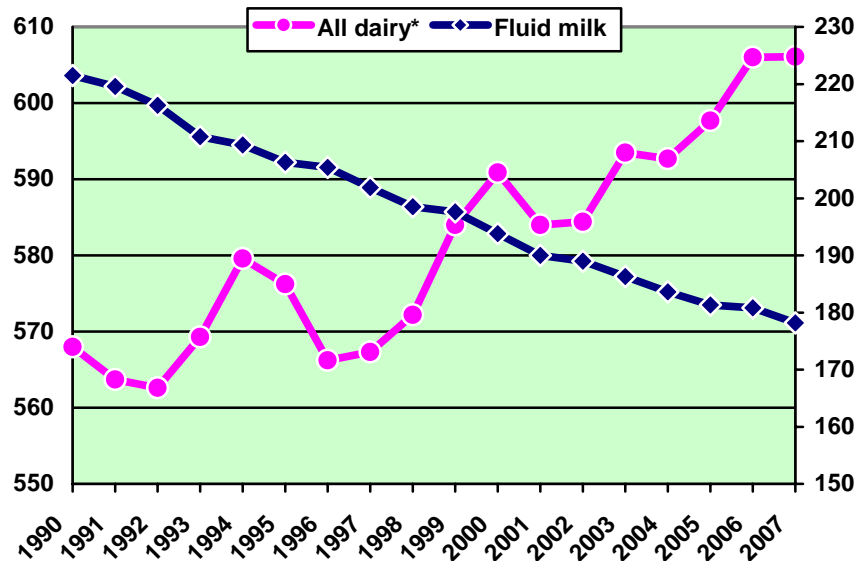
- U.S. total consumption of dairy products increased by 29% from 1980 to 2007.
- While fluid milk consumption declined by 20%, cheese consumption increase by 33%.
- There are four major categories of U.S. milk utilization: cheese (40%), fluid (32%), butter (14%), and all other (14%).

U.S. Dairy Production & Consumption (1990-2008) – Billion Pounds



Source: USDA, ERS

U.S. Per Capita Dairy Consumption (1997-2007) – Pounds



* Milk equivalent

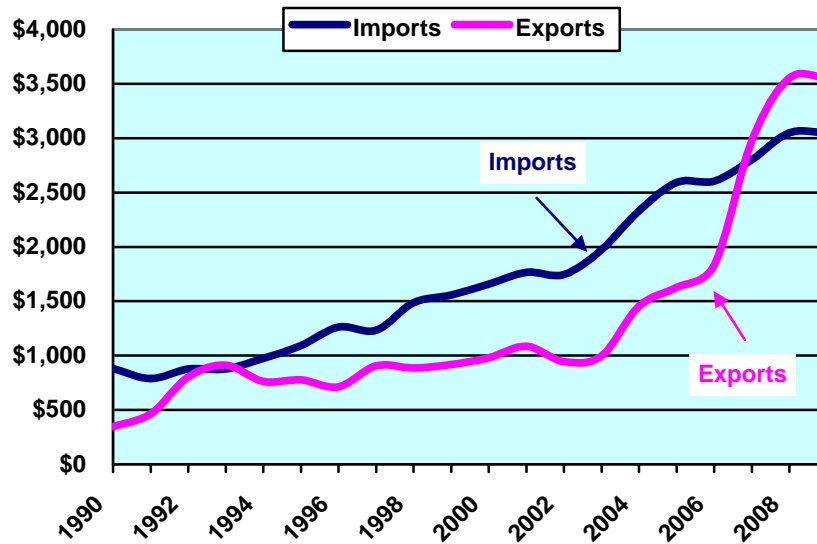
Source: USDA, ERS

U.S. DAIRY INDUSTRY

U.S. Dairy Exports and Imports

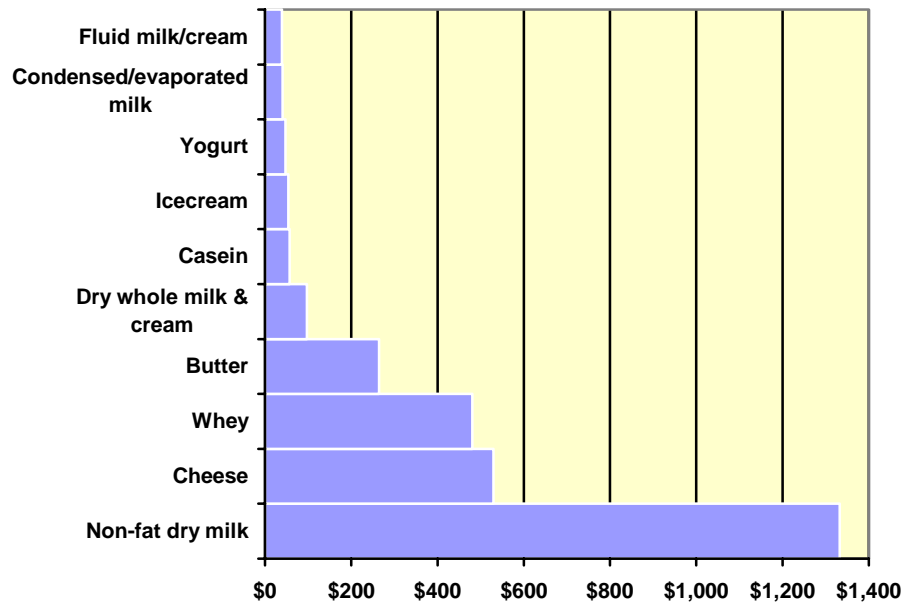
- U.S. dairy exports reached record levels in 2008 with a total value of \$3.55 billion, despite weakening global demand among economic crisis.
- U.S. dairy exports have been increasing at an annual average rate of 16%, with largest increases taken place after 2004. The U.S. is becoming a more significant player in the global dairy export market.
- Historically, the U.S. imported more dairy products than its exports.

U.S. Dairy Export and Import Trend (Million \$)



Source: USDA-FATUS

U.S. Dairy Export by Product - 2008 (Million \$)



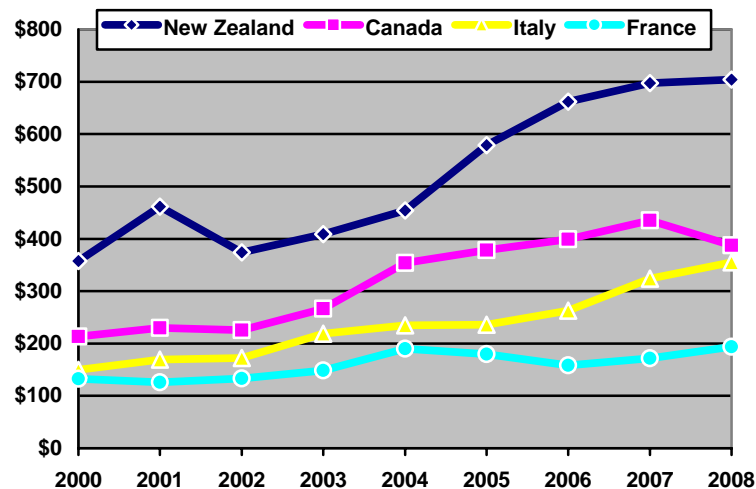
Source: USDA-FAS

U.S. DAIRY INDUSTRY

U.S. Dairy Imports by Country of Origin

- The majority of U.S. dairy imports come from just four countries: New Zealand, Canada, Italy, and France, with a combined value of \$1.6 billion or 54% of U.S. total dairy imports.
- The U.S. is the world's No. 14 cheese exporter and No. 6 cheese importer.

U.S. Dairy Import Trend: Top Suppliers (2000-2008) – Million \$



Source: USDA, FAS

U.S. Dairy Imports by Country of Origin (2008)

Country of Origin	Import Value (Million \$)
NEW ZEALAND	\$704.29
CANADA	\$387.57
ITALY	\$355.24
FRANCE	\$193.96
NETHERLANDS	\$152.88
MEXICO	\$139.64
IRELAND	\$129.07
AUSTRALIA	\$123.69
INDIA	\$109.12
ARGENTINA	\$105.61
DENMARK	\$103.37
SWITZERLAND	\$67.82
POLAND	\$55.02
UNITED KINGDOM	\$46.67
FINLAND	\$45.31
SPAIN	\$44.80
NORWAY	\$42.46
GERMANY	\$40.45
GREECE	\$35.64
All other	\$165.61
Total	\$3,048.20

Source: USDA, FAS

WORLD DAIRY SITUATION

Largest Producers and Consumers

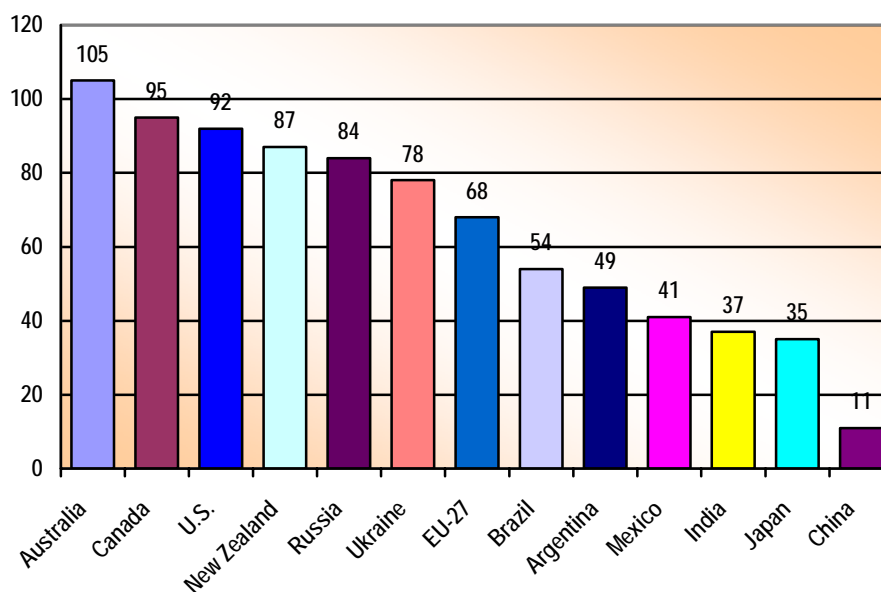
- The U.S. is the world's No. 1 milk producer from dairy cows, contributing 15% of world's total production.
- The U.S. also ranks No. 1 in cheese production and No. 2 in whey production.
- As a major consumer of dairy products, U.S. ranks No. 1 in cheese consumption and No. 2 in fluid milk consumption; on a per-capita basis, U.S. ranks No. 15 in cheese consumption and No. 22 in fluid milk consumption.

World's Top Dairy Producers (2007)

Rank	Top Producers	Cow Milk Production (1,000 MT)	Rank	Top Producers	Cow Milk Production (1,000 MT)
1	U.S.	84,189	12	Italy	11,000
2	India	42,140	13	Pakistan	11,000
3	China	32,820	14	Turkey	11,000
4	Russia	31,950	15	Netherlands	10,750
5	Germany	27,900	16	Argentina	10,500
6	Brazil	25,327	17	Australia	10,350
7	France	23,705	18	Mexico	9,599
8	New Zealand	15,842	19	Japan	8,140
9	UK	14,450	20	Canada	8,000
10	Ukraine	12,300			
11	Poland	11,800		World Total	560,487

Source: FAO and MDA/AMS

Per Capita Fluid Milk Consumption – Selected Countries (kg/year)



Source: USDA, FAO, and MDA/AMS



Minnesota Department of Agriculture (MDA)

Our mission is to enhance Minnesotans' quality of life by ensuring the integrity of our food supply, the health of our environment, and the strength of our agricultural economy.

Our three general areas of responsibility include:

- Protecting our food supply;
- Protecting our natural resources; and
- Cultivating our agricultural economy.

The MDA's **Agricultural Marketing Services Division** (AMS) works to develop and diversify Minnesota's agricultural industries, markets and products through market research, market promotion, education and technical assistance. Division programs focus on developing domestic and international market opportunities for Minnesota producers and marketers.



For more information, please contact:

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May 2009

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