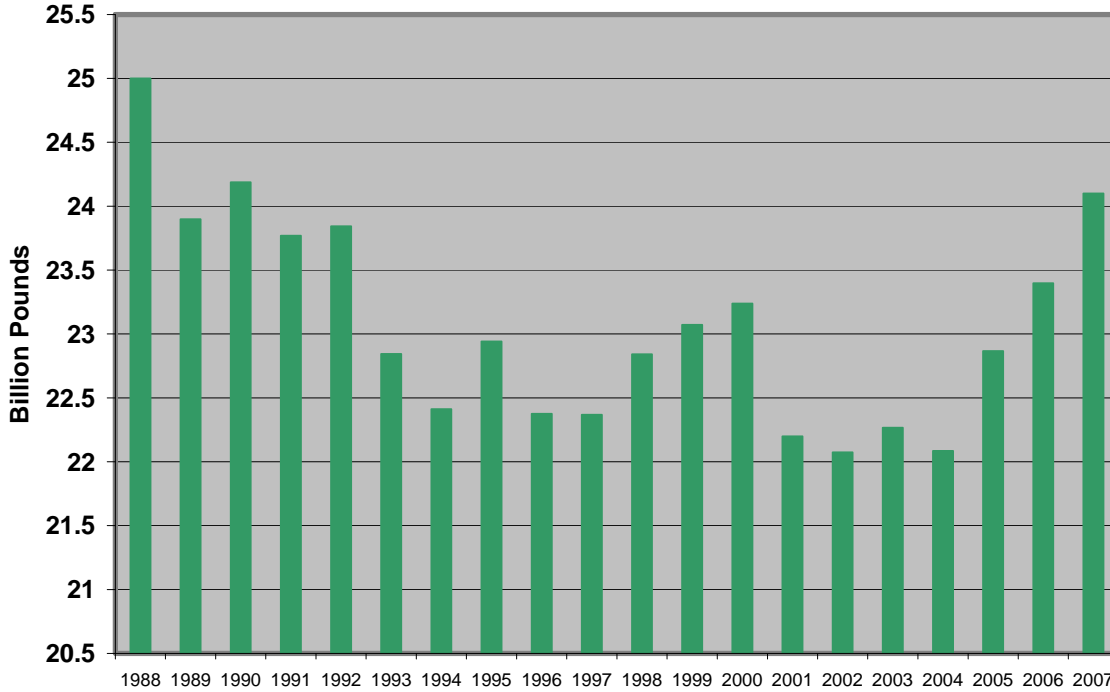


Wisconsin Cheese Plant Capacity and Future Milk Production
 Prepared by Bob Cropp
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Wisconsin's milk production: 1988 - 2007



Wisconsin's milk production peaked in 1988 at 25 billion pounds of milk and declined to a low of 22.07 billion pounds in 2002. Milk production has increased each year beginning with 2005.

Table 1: Wisconsin milk production trends: 2004 – 2007

Year	Cows (Million)	% Change	Milk Per Cow	% Change	Total Milk (Billion Lbs.)	% Change
2004	1.241	-1.2%	17,796	+0.4%	22.085	-0.8%
2005	1.236	-0.4%	18,500	+4.0%	22.866	+3.5%
2006	1.243	+0.6%	18,824	+1.8%	22.398	+2.3%
2007	1.247	+0.3%	19,310	+2.6%	24.080	+2.9%
Average %: 2004 to 2007		+0.2%		+2.8%		+3.0%

Wisconsin's milk cow numbers also increased in 2006 and 2007. Modernization, herd expansions and new large herds are turning around milk cow numbers and milk production in Wisconsin.

Table 2: Wisconsin dairy herds, 2007

Herd Size (number of cows)	Percent of herds	Percent of milk
1 to 29	13.2	1.5
30 to 49	25.0	10.0
50 to 99	42.4	29.0
100 to 199	12.5	18.5
200 to 499	5.2	19.0
500 plus	1.7	22.0

- Herds under 50 cows will continue to steady decline in numbers.
- Some of the 50 to 99 cow herds will exit the dairy industry and some will modernize and expand.
- Herds with 100 cows or more will increase in number.
- Herds of 500 or more cows will increase in number with many in the 600 to 1,200 cow range and more herds above 1,200 cows
- Herds with 200 or more cow now produce 41 percent of the state's milk.

Wisconsin's cows and milk production by 2012:

- The expansion of larger herds will more than offset the exiting of smaller herds; thus the number of milk cows could increase annually on the average of 0.2% to 0.3%.
- As smaller herds exit and modernization and expansion of remaining herds occur milk per cow could increase annually on the average of 1.5% and 2.0%.
- Total milk production could increase annually on the average of 1.7% to 2.3%
- Total milk production by 2012 could be in the range of 26.1 billion pounds to 26.8 billion pounds

Wisconsin total pounds of cheese produced in 2007:

- 2.451 billion pounds
- Cheese plants used about 24.5 billion pounds of milk, about 420 million more pounds of milk than what was produced in Wisconsin in 2007. Considering that about 10 percent of Wisconsin's milk is used for fluid (beverage) milk and the production of dairy products other than cheese, about 21.7 billion pounds of Wisconsin's milk was used to make cheese. Therefore, about 2.8 billion pounds of milk (some in the form of condensed skim milk, nonfat dry milk, liquid MPC) was brought into Wisconsin to make cheese.
- Wisconsin is milk protein deficit for cheese making. Therefore, condensed skim milk, nonfat dry milk and liquid MPC is brought into the state for standardizing raw milk for cheese making.

Wisconsin cheese plant capacity:

- In 1988 when Wisconsin's milk production peaked at 25 billion pounds Wisconsin had 225 cheese plants. As milk production declined excess cheese plant capacity increased. Competition by dairy cooperatives and non-cooperative cheese plants for a shrinking milk supply led to a variety of milk premiums paid to dairy producers as well as milk hauling subsidies. As a result, Wisconsin cheese makers pay dairy producers more for milk to make cheese than any other state. This has tightened the

- net operating margins of cheese plants making it difficult to generate needed capital for modernization of plants or building new plants. Many small cheese plants closed and dairy cooperatives have closed plants and consolidated production in remaining plants. As of 2007 Wisconsin's cheese plants were down to 116 plants.
- Dairy cooperatives and non-cooperative cheese plants have invested capital to modernize old existing plants. No new major cheese plants have been built since the Alto cheese plant in 1988. Some smaller cheese plants have modernized and converted to specialty cheese production and a new specialty cheese plants have been built. Specialty cheese now accounts for 16 percent of Wisconsin's cheese production. But, the largest portion of cheese production in Wisconsin and the U.S. is commodity cheese (cheddar, mozzarella, etc.). Wisconsin needs to compete for the national commodity cheese business against large and newly constructed cheese plants in California, Idaho and Texas.
 - It is not possible to have 100 percent utilization of cheese plant capacity 12 months of the year. Milk production still has seasonal trends. Cheese sales have seasonal trends. Fluid (beverage) milk sales are seasonal and change during holidays. Therefore, Wisconsin cheese plants need to serve a balancing function. Wisconsin doesn't have powder plants to serve the balancing function. This means that at times plant capacity is almost exceeded and at times utilization will be less than 100 percent. But, with plant closings and now milk production expansion there is not a lot of excess plant capacity.
 - Assuming 95 percent of cheese plant capacity is used on the average over the course of a year, total cheese plant capacity is about 25.8 billion pounds of milk. But, considering seasonality factors, Wisconsin cheese plant capacity may be no more than 25 billion pounds.
 - With fluid use of milk static, most all of the additional milk production in Wisconsin will be used to make cheese.
 - Assuming Wisconsin's milk production will increase 1.7% annually, 100 percent of cheese plant capacity would be utilized just to handle Wisconsin produced milk by 2010. If Wisconsin's milk production increases annually by 2.3%, 100 percent cheese plant capacity to handle Wisconsin's milk production would be reached by 2009.
 - ***But, Wisconsin dairy cooperatives and other Wisconsin cheese plants now have dairy producers in neighboring states of Iowa, Illinois, Minnesota and Michigan. They will still need to handle the milk from these dairy producers. In addition, nonfat dry milk, condensed skim milk or liquid MPC will continue to be brought in to Wisconsin to standardize raw milk for cheese making. Considering outside milk and standardization, it appears that Wisconsin's cheese plant capacity is already being utilized close to 100 percent most of the year. At least consideration needs to begin on new investment in cheese plant capacity in order to assure dairy producers there will be a good market for their expanding milk production. It takes a year or more to construct a new plant. Wisconsin initiatives in milk production are now having a positive impact. Dairy cooperatives and other milk companies were not interested in investing in more plant capacity when Wisconsin's milk supply was declining and competition for milk resulted in premiums being made for milk that were not cost justified. Now with milk production increasing Wisconsin needs to***

consider incentives for dairy cooperatives and other milk companies to invest in cheese plants and whey processing plants.

- The national commodity cheese business is a very competitive business. Therefore, in order to make Wisconsin cheese plants competitive as well as having favorable operating margins that will make capital investment in plants and equipment economically feasible, consideration also needs to be given to methods for reducing farm to plant milk procurement costs and cost justified milk premiums paid to dairy producers.