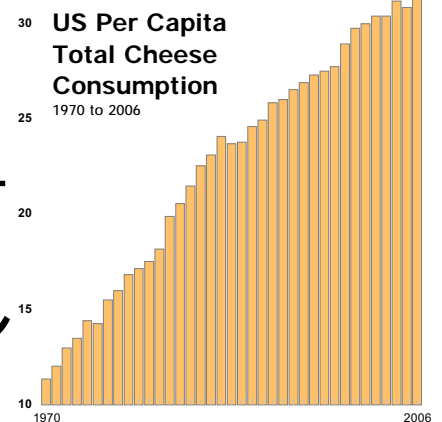




CHEESE REPORTER

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Per Capita US Cheese Consumption Nears 32 Pounds After Big 06 Jump

Almost All Cheese Varieties Recorded Increases In 2006

Washington— Per capita cheese consumption last year reached a record-high 31.85 pounds, up almost one pound from 2005, according to preliminary figures released this week by USDA's Economic Research Service (ERS).

ERS actually revised 2005's per capita cheese consumption estimate down by over half a pound, to 30.86 pounds. That put 2005 per capita consumption below 2004's then-record per capita consumption of 31.22 pounds.

With that revision, 2005 marked the first time since 1988 that per capita cheese consumption actually declined. The last time before 1988 that per capita consumption fell was in 1975, when per capita cheese consumption, at 14.27 pounds, was less than half of what it is today.

In 2006, per capita consumption was higher than in 2005 in almost every category tracked by ERS, and set new records in most categories.

Records were set in both the broad categories of American-type and Italian-type cheeses, with Ital-

ian-type cheese leading American-type for the second straight year.

Per capita consumption of Italian cheeses last year reached a record 13.76 pounds, up almost half a pound from 2005 and more than a pound higher than 2003 consumption. Per capita consumption of Italian cheeses has more than doubled since 1985.

Within the Italian cheese category, per capita Mozzarella consumption last year reached a record 10.50 pounds, up 0.32 pound from 2005. Last year was the third time in the last five years that per capita Mozzarella consumption topped Cheddar consumption.

Per capita Mozzarella consumption has grown by more than five pounds since 1986, and by more than nine pounds since 1971.

Last year, for the third straight year, per capita Provolone consumption topped one pound. More specifically, per capita Provolone consumption last year was a record high 1.07 pounds, up 0.04 pound from 2005 and more than double the 1983 level.

Per capita Ricotta consumption last year was 0.82 pound, up slightly

from 2005 but slightly below 2004's consumption. Per capita Ricotta consumption had reached a record high of 0.93 pound in 1996.

Parmesan consumption continues to grow; last year, per capita consumption was a record 0.64 pound, up 0.06 pound from 2005. The previous record for per capita Parmesan consumption was 0.61 pound, set in 1997.

Per capita Romano consumption last year was a record 0.25 pound, up from 0.22 pound in 2005. Per capita Romano consumption has fluctuated between 0.13 and 0.25 pound every since 1970, although it's been at or above 0.20 pound every year since 2002.

Finally in the Italian cheese category, per capita consumption of all other Italian cheeses last year was 0.48 pound, unchanged from 2005. Despite the lack of change last year, per capita consumption of all other Italian cheeses has tripled just since 1997.

Per capita consumption of American-type cheeses last year was a record 13.13 pounds, up 0.24 pound

• See **Record Consumption**, p. 10

House Expected To OK Farm Bill After Defeating Major Reforms; Johanns Disappointed With House Ag Committee's Bill

Washington— The House of Representatives was expected to pass its version of the 2007 farm bill this afternoon after defeating a major farm-policy reform amendment Thursday night and despite criticism from US Secretary of Agriculture Mike Johanns.

Heading into the final House vote today, the National Milk Producers Federation (NMPF) was urging House members to vote for the farm bill approved last week by the House Agriculture Committee. That legislation, the dairy portion of which was expected to remain intact in the final House farm bill, includes:

- A dairy product price support program, under which USDA would be required to support product prices as follows: \$1.13 per pound for Cheddar blocks; \$1.10 per pound for Cheddar barrels; \$1.05 per pound for butter; and 80 cents per pound for nonfat dry milk.

- A dairy forward pricing program under which dairy producers could voluntarily enter into forward price contracts with handlers for milk that is not Class I.

- Revisions to the federal order amendment procedures.

- An extension of the Milk Income Loss Contract (MILC) program.

- An expansion of the dairy producer promotion checkoff to Alaska, Hawaii, the District of Columbia and Puerto Rico, which will enable the promotion checkoff to be extended to imported dairy products.

- A reauthorization of the Dairy Export Incentive Program.

- A report on nonfat dry milk price reporting procedures.

- A Federal Milk Marketing Order Review Commission to review and evaluate federal and non-federal milk marketing order systems.

• See **House Farm Bill**, p. 9

Great Lakes Cheese To Build New Cheese Plant To Replace Existing Plant In Adams, NY; Project Should Be Done By April 2009

Hiram, OH— Great Lakes Cheese Co., Inc., on Monday announced plans to build a new plant in Adams, NY, to replace the company's existing cheese plant located adjacent to the new site.

The building project will involve two phases of construction, resulting in a new, 142,000-square-foot state-of-the-art cheese processing plant which will more than double the existing plant's current production capacity.

The plant currently processes 1.2 million pounds of milk per day; once the project is complete, the new plant will have the capacity to process 2.5 million pounds of milk per day. Construction is scheduled to begin immediately and should be completed by April 2009.

Great Lakes Cheese had acquired the existing Adams plant from

• See **New Adams Plant**, p. 11

A Spelunking We Shall Go: Closely Watched Cheese Caves Favorably Affect Flavor, Texture

Many Factors Need To Be Closely Monitored For True Cave Affinage

Madison—The romantic trend of cave-cured cheese continues to sweep the industry, but those who create a cave or affinage room simply for show can at best only minimize harm to cheese during the aging process.

Manufacturers and affineurs determined to put out quality cave-aged cheese need to closely monitor temperature, airflow, humidity, cleanliness and cross-contamination. Retailers also need to be aware of the special handling and storage that cave-aged cheese requires, and should never be sold as part of a "cut and wrap" setup.

The cheese caves of Faribault Dairy Company, Inc., Faribault, MN, are the company's strongest selling point, said cheese maker and Faribault Dairy president Jeff Jirik.

The caves have a great historical tie, Jirik said. Residents began brewing beer here in 1854 until Prohibi-

tion. In 1936, this became the first Blue cheese plant in the US.

Faribault Dairy cave-ages Blue, Gorgonzola, Provolone, Brick, Muenster and several varieties of Cheddar.

"All of the cave-aged cheeses have richer, more complex flavor profiles and distinct rinds, as compared to conventional cheese 'aged' in plastic," Jirik said.

"I'm not sure if there is a cheese that wouldn't age better in caves – assuming it's a cheese that is meant to be aged," Jirik said.

Good, natural caves offer unmatched security and stability for aging cheese, he said. The basic attributes of a good cave are cleanliness, controlled airflow, consistent temperature and humidity.

Some of the difficulties in maintaining caves include protecting against a "rogue" mold or yeast – the caves are an ideal environment for

• See **Cheese Caves**, p. 8

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Cheese Caves

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their growth, Jirik said.

"Another complication is the physical handling required; we don't use fork lifts in the cave," he continued.

Orb Weaver Farm, New Haven, sits on 100 acres in Vermont's Champlain Valley. In 2001, the farmstead operation began making cave-aged Vermont Farmhouse cheese.

Using stones from neighboring Panton, we built a cave in a small hillside on our farm to closely replicate the aging process used before refrigeration, said co-owner Marjorie Susman.

The inside of the cave is stone, with a poured cement interior and arched ceiling.

It measures about 20 feet long by 10 feet wide, with the walls reaching seven feet high before the ceiling domes.

The shape of the cave has a lot to do with controlling moisture levels, Susman said. When it gets very moist, liquid runs down the cave rather than drips.

The flat, stucco finish was also made using a lot of limestone, she added, which prohibits mold from growing on the walls.

"The difference between just having a walk-in and having a cave is that the inside finish of the walls has a huge impact on how the cheese eventually comes out," Susman said.

How Caves Affect Taste, Texture

For cheese production at Orb Weaver Farm, a single recipe is used and the exact same Vermont Farmhouse cheese is aged two ways – half is cave-cured and half is waxed and aged in a walk-in cooler.

The waxed cheese is somewhere between a Havarti and a Colby, Susman said. A basic, good cheese – it's the cheese people keep in their fridge.

"It's a raw milk cheese with a wonderful, buttery flavor – but it's not cave-aged," Susman said.

Using the same recipe, the cave-aged Vermont Farmhouse cheese is a much denser, more complex cheese. A little bit nutty, she said.

"To cut into both cheeses side by side, the waxed cheese has some little holes in it, where the cave aged become much denser and those holes are not there – a much more concentrated flavor," Susman said.

Cheese that is cave-aged will have a different taste and texture as opposed to cheese aged in cold storage, according to Stan Dietsche, vice president of sales and procurement for Oshkosh Cheese Sales & Cold Storage, Oshkosh, WI.

Using Cheddar as an example, a traditional bandaged or waxed variety will likely taste different compared to Cheddar sealed in a bag, boxed and cured.

In general, most of the cave-cured cheese varieties are waxed or finished on the surface in a unique way, which allows the cheese to breathe, he said.

Cheese caves present the opportunity to romance cheese and give it character, Dietsche said. In a

national or world cheese competition, a cave-cured cheese creates excitement.

"On the other side of the coin, it's sometimes hard to beat a nice 18- to 24-month 40-pound block of Cheddar or a bandaged daisy that has been aging peacefully in a cold storage facility like ours since birth," he continued.

For Swiss or hard Italian varieties, ideal conditions are shelf-cured and traditionally bagged and sealed, Dietsche said. Both ways produce a very nice piece of cheese.

Proper Cheese Cave Maintenance

Keys to proper cave maintenance include temperature, humidity, cleanliness, airflow and storage.

To maintain consistent temperatures, Orb Weaver Farm uses supplemental coolant during the summer months.

"We thought that just having the cave underground would do it, but if the temperature starts climbing much over 50 degrees, it will kick in," Susman said.

For moisture, we don't have to do anything. Our cheese is a pretty rugged cheese and as long as the rind doesn't crack, Susman said she very rarely has to put water on the floor to remedy moisture levels.

A cheese cave should have a cool temperature, high humidity and air exchange – much like an actual cave, according to Max McCalman, maitre fromager and dean of curriculum at New York City's Artisanal Group.

A good cave, which is intended for storing a full range of cheeses all in one chamber, will work best if it's set to about 50 degrees Fahrenheit with a relative humidity of between 85 and 90 percent, McCalman said.

If the cave has only one chamber, there may be areas which are a bit cooler than others, and some sections that are less drafty. These areas can be used for storing cheese that will be better maintained in variable conditions, he said.

A good cheese cave will also have light ventilation, but should not be too drafty. And it shouldn't be too large for the inventory of cheeses it's meant to contain, McCalman continued.

Separation Key In Preventing Cross-Contamination In Single Chamber

Having different types of cheeses in one cave is not as big a problem as one might expect, McCalman said. Keeping the cheese somewhat segregated within one cave will minimize cross-contamination of bacteria and molds.

"For example, keeping Blue cheeses away from the open-textured, crumbly types is recommended, as the Blue molds can penetrate the interiors of non-Blue cheeses over time and negatively



The caves at Orb Weaver Farm

affect their flavors," he said.

If the single-chambered cave has different shelves, it's best to keep the families of cheeses together and separate from the others on their own shelves.

"Ideally, a cave should have wooden shelves so that cheeses can 'breathe' underneath themselves, as well as around the sides and tops of the cheeses," McCalman said.

"All of the cave-aged cheeses have richer, more complex flavor profiles and distinct rinds, as compared to conventional cheese 'aged' in plastic."

—Jeff Jirik, Faribault Dairy

Again, the cheese cave shouldn't be too large, he continued. Keeping several cheeses in a small space is preferable to keeping a few in a large space. The cheeses themselves will tend to keep humidity levels at an optimum level.

"If you have the luxury of having a multiple-chambered cheese cave, keeping the families of cheeses in their own caves will allow you to give each family the specific conditions of temperature, humidity, and air exchange, as well as the microflora specific to that family so the cheeses will develop and be best maintained," McCalman said.

Properly Maintaining Air Exchange, Microflora & Preventing Mites

A consistent temperature and humidity is more difficult to maintain if the cave does not have a good seal around its door – air exchange should be light and gradual, McCalman said.

"If the door of the cave is opened too frequently or does not close tightly, humidity levels and temperatures will be more difficult to maintain," he said.

Also, if cheeses from different families are moved randomly from one shelf to another, they will take their microflora with them. For instance, if a washed-rind cheese is placed on a fresh goat's milk cheese shelf, it will likely take some of its *Brevibacterium* linens with it,

• See **Cheese Caves**, p. 12

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Cheese Caves

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McCalman continued.

And if there is a problem with mites on any of the cheeses, they should be brushed off outside the cave, and stowed on the lower shelves, he said.

Cheese Caves Versus Cold Storage Ideal conditions exist in both caves and cold storage when the desired combination of constant temperature, humidity and air flow is maintained, Stan Dietsche said.

"We have installed state-of-the-art equipment and monitors to maintain the desired conditions our customers require and offer what we feel is close to ideal," Dietsche said.

"You can't simply say it is 'cave aged' and charge an extra five or six dollars per pound without giving the value to the customer"

—Steve Ehlers,
Larry's Market

Oshkosh Cheese Sales & Cold Storage operates five rooms below ground level which were built when the original warehouse was constructed in the early 1950s. If built today, it could be called an affinage curing facility, Dietsche said.

Over the years, temperatures have remained fairly constant in both summer and winter, he continued. Proper control of humidity and air flow is key to this type of environment.

Ideal storage conditions are imper-

ative. The atmosphere offered in a good cheese cave will help a cheese develop to its fullest potential for taste and texture, McCalman said.

"A regular warehouse without the ideal conditions for cheese storage will not only deny that cheese potential for reaching its peak, but will also cause the cheese contained therein to suffer – likely causing it to dry out and develop off-flavors," McCalman said.

"Conditions for storing some cheese types are more specific than others," he continued. "The younger, softer cheeses require more neonatal TLC than the older, drier types," he continued.

All cheeses do better in properly calibrated and well-maintained cheese caves, McCalman said.

"Again, the more aged and dried the cheese, the less vulnerable it is to non-cave conditions," he said. "The aged, cooked, pressed cheeses deteriorate much more slowly than the soft, little young ones."

Market Becoming More Aware Of Cheese & Its Proper Care

Now that the majority of producers who cave-age cheese are serious and more experienced with the process, cheese is much easier to market, said Steve Ehlers, owner of Larry's Market, Brown Deer, WI.

"Sometimes, just telling the story of the cheese and letting customers try it so they can taste the individual characteristics that cave-aging produces helps sell the cheese," Ehlers said.

"Other times, you need to provide more basic information about what makes cave-aged cheeses unique," he said. "All of this combines to give us a great story to tell our customers."

"Many of our customers are becoming more knowledgeable about

Jasper Hill Farm To Receive \$400,000 Loan To Complete Underground Cheese Cave



The proposed design of Jasper Hill Farm's new cheese cave, which is expected to benefit a number of small dairy farms, along with other cheese producers who will lease space in the cave.

Greensboro, VT—The town of Greensboro will receive a \$400,000 community development grant to provide a loan for Jasper Hill Farm to complete construction of a \$2.9 million underground cheese aging cave.

Vermont Gov. Jim Douglas made the declaration here last week at Jasper Hill during a special ceremony. In all, the Vermont Community Development Program will allocate \$1.6 million in funds to seven communities. The grants will also leverage over \$8 million in other private and public resources.

Jasper Hill's aging, packaging and shipping facility will create 10 full-time jobs and benefit a number of small family dairy farms, along with other cheese producers who will lease space at the plant.

"The delicious cheeses that will be produced here – not only Jasper Hill's signature Bayley-Hazen Blue – but other cheese makers' as well, will help continue Vermont's reputation as a world leader in this field," Douglas said. "And help grow our value-added dairy product sector as well."

Mateo and Andy Kehler, owners of Jasper Hill Farm, broke ground on the 20,000-square-foot aging facility last fall. Concrete is being poured this week, and the company plans to move cheese in this fall.

The facility will provide aging space for fellow cheese makers, lowering the barriers for market entry and helping ease the pressures of cheese aging and marketing, Mateo Kehler said. For more details, visit www.jasperhillfarm.com. •

cave-aged cheeses due to some articles in various food magazines and major newspapers about cave aging. Our favorite way to educate is by taste comparisons," he continued.

The market is definitely becoming more knowledgeable about cheese and its care – this is a great thing, McCalman said.

"A cheese that when it was created had a chance to develop into a glorious food has too often suffered inappropriate care and poor storage conditions many times over before the cheese ends in the mouth," he said.

Cheeses that have been stored in the best conditions speak for themselves. They will taste and smell better, and the market will be appreciative, McCalman said.

The market for cave-aged cheese is growing, Faribault's Jeff Jirik agreed, as customers become aware of

the richer, more complicated flavor cave affinage provides.

Orb Weaver Farm has been making cheese since 1981 and when the company first started, Susman said no one had heard of naturally rinded cheeses.

"It wasn't until the 1990s that someone said 'you should try putting your cheese in a cave,' and we said 'what's that?'" she said.

"Right now it seems that everyone is starting with cave-aged cheese, and there seems to be a pretty good market for it," Susman continued.

Retail: Handling Cave-Aged Cheese Real cave-aged cheeses should not be sold as part of a "cut and wrap" program, Ehlers warned.

"This will ruin the natural rinds that occur in cave aging, which to

• See Cheese Caves, ➔

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Cheese Caves

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me is part of what creates the uniqueness and special marketability of these cheeses," he said.

The rind in particular becomes gummy and pasty when pre-wrapped. These cheeses can dry out faster in a cooler and need extra care, Ehlers said. There is also the chance of faster mold growth within the cheese once it has been cut.

"Ultimately, the flavor and texture of the cheese depends on either the cheese maker or the affineur who is doing the actual aging. There can be completely different flavor profiles that occur when natural rind cheeses have been cave-aged. Cave aged Cheddar will have a very different texture than a warehouse aged Cheddar," Ehlers said.

Cave Created For Show Can Only Minimize Harm To Cheese, At Best

A cheese cave created for show – perhaps prominently displayed near a restaurant entrance through which sunlight and extreme fluctuations of temperature take their toll on conditions within – is not the point of having a cheese cave.

"On the other side of the coin, it's sometimes hard to beat a nice 18- to 24-month 40-pound block of Cheddar or a bandaged daisy that has been aging peacefully in a cold storage facility like ours since birth."

—Stan Dietsche, Oshkosh Cheese Sales & Cold Storage

"It's nice to say that one has a cheese 'cave' dedicated to storing or maturing cheeses, but one should not fool themselves into believing that they are adding value to cheese flavor and texture when the best that one can generally accomplish in a cheese cave is to minimize the harm to cheeses," McCalman said.

"This should be the goal of the cheese lover – to maintain cheeses in the best conditions available," he continued.

There is great potential for cave-aged cheese, but producers need to be serious about the techniques and in particular, the finished product, Ehlers said.

"This should not be a product that a cheese maker says, 'Well, everyone else has a cave-aged cheese, so let's just take one of our Havartis, stick it in a cave for a day or two and charge more to fill out our product line,'" Ehlers continued.

Cheese makers need to know and understand what they want to accomplish with cave aging, and I think the cheese needs to determine how it should be aged, he said.

Hopefully, most cave-aged cheeses will be on a relatively small scale because of the time and effort needed to do it right.

Retailers also need to be educated on how to handle these cheeses, Ehlers stressed.

Storage, cutting, wrapping, knowing who your customer is, and understanding the differences of cave-aged cheeses are all criteria to be considered if a retailer wants to carry these cheeses.

As with any different trend, there is always the danger of over-use of the term or when people flood the market with mediocre products, both of which will ruin the uniqueness of these cheeses, Ehlers said.

"You can't simply say it is 'cave aged' and charge an extra five or six dollars per pound without giving the value to the customer," he continued. •

Method For Isolating Milk Proteins From Milk Or From Whey Patented

Washington— The US Patent and Trademark Office (USPTO) this week granted a patent for an invention that concerns a method for isolating milk proteins from milk or from whey.

The inventor is Jeo Soupe of Rennes, France. The patent was assigned to Compagnie Laitiere Europeenne.

The subject of this invention is a process for isolating milk proteins from milk or whey comprising the following steps:

- The milk or the whey is sterilized and defatted.
- The milk fraction derived from the first step is passed over a cation-exchange resin conditioned in an elution column.

• The fraction retained on the resin is eluted with an aqueous salt solution.

• The eluate resulting from the third step is desalted, preferably by ultrafiltration and diafiltration, and then sterilized, preferably by micro-filtration.

Milk protein fractions according to this invention exhibit advantageous properties; in particular they promote the growth of osteoblast cells and that of intestinal cells. The milk protein fractions of the invention are also effective for inhibiting the growth of osteoclasts and pre-osteoclasts.

These properties, and the already known properties of the milk protein fractions of the prior art, make it possible to envisage the use of these compositions in numerous applications. •



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