



CHEESE REPORTER

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Global Dairy Trade Prices Surge Again; US Dairy Prices Also Rise

GDT's Skim Milk Powder Prices Jump 27.8%; US Grade A NDM Price Rises To Almost \$1.70 A Pound

Auckland, New Zealand-Recent predictions that global dairy product prices would remain strong for the next several months appear to be coming to fruition.

At this week's semi-monthly Global Dairy Trade (GDT) online trading event, the GDT-TWI index surged 14.2 percent from the previous trading event, held two weeks ago.

This was the third straight double-digit percentage increase in the GDT-TWI index; the two previous increases were 14.8 percent during the week of March 22 and 10.4 percent during the week of March 8.

Meanwhile, US spot market dairy product prices were up for all dairy products traded daily at the CME Group.

Cheddar 40-pound blocks ended the week at \$1.7625 per pound, while 500-pound barrels ended the week at \$1.6925 a pound. Both prices increased three cents today,

and both price increases were due to unfilled bids for two cars. There were no sales of either blocks or barrels today.

Butter and both grades of nonfat dry milk also increased at the CME this week; it was the first price increase for Extra Grade NDM since last fall.

Leading the increases at this week's Global Dairy Trade trading event was skim milk powder, the average price of which jumped 28.7 percent, to \$5,142 per metric ton (\$2.33 per pound) from the previous trading event.

The average winning price for Contract 1 (May) skim milk powder (this is DairyAmerica's skim milk powder) was \$3,888 per ton, up 10.0 percent; and the average winning price for Contract 2 (June) skim milk powder (this includes DairyAmerica, Arla and Fonterra SMP) was \$4,777 per ton, up 24.5 percent from the previous trading event.

Average winning prices for Contracts 3 through 6 (July through October), which were all Fonterra's skim milk powder, with changes from the previous trading event, were, respectively: \$6,025

per ton, up 37.3 percent; \$5,562 per ton, up 27.8 percent; \$5,623 per ton, up 33.4 percent; and \$5,537 per ton, up 42.3 percent.

Results for other dairy products in this week's Global Dairy Trade online trading event, with comparisons to the trading event held two weeks ago, were as follows:

Cheddar cheese: The average winning price was \$4,622 per metric ton, up 6.6 percent. Average winning prices were: Contract 2, \$4,344 per ton, up 4.4 percent; and Contract 3, \$5,180 per ton, up 10.3 percent.

Whole milk powder: The average winning price was \$5,100 per ton, up 7.0 percent. Average winning prices were: Contract 2, \$5,998 per ton, up 12.8 percent; Contract 3, \$5,943 per ton, up 10.7 percent; Contract 4, \$6,119 per ton, up 18.6 percent; Contract 5, \$4,796 per ton, down 7.9 percent; and Contract 6, \$4,620 per ton, up 7.7 percent.

Butter: The average winning price was \$4,425 per ton, down 2.7 percent (that was the only price decline on Global Dairy Trade this

• See **Dairy Prices Rise**, p. 47

Cheese Production Fell Slightly In February Without Adjusting For Extra Day In 2012; American-Type Cheese Output Increased

Washington-US cheese production during February totaled 857.4 million pounds, down slightly from February of 2012, which had an extra day due to leap year, USDA's National Agricultural Statistics Service (NASS) reported Thursday.

Cheese production during the first two months of 2013 totaled 1.793 billion pounds, up 1.4 percent from the first two months of 2012.

(Editor's note: the percentage changes that follow are not adjusted for the extra day in February of 2012.)

Regional cheese production during February, with comparisons to February of 2012, was: Central, 391.5 million pounds, up 1.5 percent; West, 354.2 million pounds, down 2.0 percent; and Atlantic, 111.7 million pounds, up 1.3 percent.

February cheese production in the leading states, with comparisons to February of 2012, was: Wisconsin, 219.9 million pounds, up 3.7 percent; California, 175.2 million pounds, down 5.2 percent; Idaho, 63.9 million pounds, up 1.8 percent; New York, 59.4 million pounds, up 1.6 percent; New Mexico, 57.6 million pounds, down 2.3 percent; Pennsylvania, 34.7 million pounds, up 3.3 percent; South Dakota, 21.7 million pounds, down 3.6 percent; Iowa, 21.5 million pounds, up 10.1 percent; Ohio, 15.2 million pounds, down 5.6 percent; and Vermont,

• See **Feb. Dairy Output**, p. 6

NASS To Provide Partial US Milk Production Estimates For Rest Of Fiscal 2013

Washington-USDA's National Agricultural Statistics Service (NASS) announced Wednesday that it will provide an estimate of US milk production each month through September of 2013, which is the end of federal fiscal year 2013.

Last month, NASS had announced that it was suspending its monthly "Milk Production" report for the remainder of the fiscal year due to reduced funding caused by government sequestration.

Both National Milk Producers Federation (NMPF) and the International Dairy Foods Association (IDFA) had expressed concern about the report being suspended (for more details, please see **NASS To Suspend Monthly Milk Prod-**

• See **Milk Production**, p. 45

Revival Of Open-Cured, Bandaged Cheese Brings Increased Risk Of Mite Infestation

Cheese Quality Suffers From Mite Infestations; Safety, Health Problems Are Also Possible

Madison—The trend of smaller cheese manufacturers making open-cured, cave-aged specialty cheeses has resurrected a chronic torment of the industry – cheese mites.

Many smaller cheese plants are returning to traditional bandage-wrapped cheese, aged in cool, dark caves and cellars – conditions ideal for breeding and transporting mites.

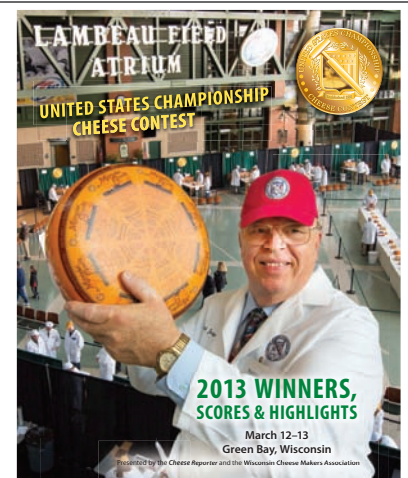
Cheese mites are small arachnids that are barely visible to the naked eye, but their affinity for cheese and ability to bore holes on the surface of a rind can be a costly consequence for cheese plants that are unknowingly

infested with the pest, according to a new paper entitled "Control of Cheese Mites During the Aging Process" by Bill Wendorff, University of Wisconsin-Madison food science professor, and Bénédicte Coudé, assistant coordinator for the Cheese Industry and Applications Program, Wisconsin Center for Dairy Research (CDR).

Mites can be found in the wood shelves used for aging cheese and distributed by attaching themselves to clothing or people, according to the study. Mites can also be carried in an air current and find their way into the cheese room.

Unclean conditions in the curing room such as greasy shelves, old dirty cheese boxes, dirty walls, ceilings or floors encourage the development of cheese mites, too.

• See **Mite Infestation**, p. 36



Cheese Contest Booklet
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Mite Infestation

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it's one of the biggest kept secrets of the industry. No one wants anyone to know they've got an insect infestation," Aschebrock said. "It's kind of a cancer on the industry."

Smaller plants need to be their own watchdogs using the tools of temperature and humidity – that's the key to keep these things from spreading, Aschebrock continued.

"However, in a curing room you don't want the air real dry or the temperature real low because the cheese won't age properly," he said.

Retailers need to closely monitor their coolers as well, Aschebrock said. When you're selling at retail and you're really infested, the only thing you can do is wash each cheese with a brush.

"You can get them scraped off, but you won't get 100 percent, no matter how hard you scrub, especially on an open-surface cheese like Gorgonzola or Brick where the mites can get down into the cheese," he said.

Cheese mites also have the propensity to multiply, and can number in the tens of thousands on cheese surfaces that are unprotected.

"Years ago, we used to have a lot of wooden boxes. You'd take your cheese to a warehouse and get used boxes back, dragging the mites back and forth," Aschebrock said. "Once you've got them in a cooler, it doesn't take long to multiply."

Harm To Consumers, Handlers

Not only does cheese quality suffer from infestation of cheese mites, but the health of consumers and cheese handlers may also be at risk.

The presence of cheese mites may result in a number of aller-

genic diseases like asthma, atopic dermatitis and allergic rhinitis that can cause workers and customers physical and mental health problems, Wendorff and Coudé wrote.

Mites have been reported to have caused severe skin irritation in cheese handlers, as well as gastrointestinal disorders in consumers.

An investigation by researchers in 1975 involving 214 cheese plant workers in central France showed 55 positive reactions caused by cheese mites.

In some European countries, however, cheese makers have a lassie faire attitude about the pests. Several years ago, Aschebrock and a team of researchers made a trip to Germany and Switzerland, discovering mites in coolers and some plants with heavy infestations.

"Cheese on shelves had piles of residue – brown or gray dust – around and on the cheese," Aschebrock said. "When asked about how they controlled the mites, we were told they didn't try. The mites had holes bored into the sides of Swiss wheels."

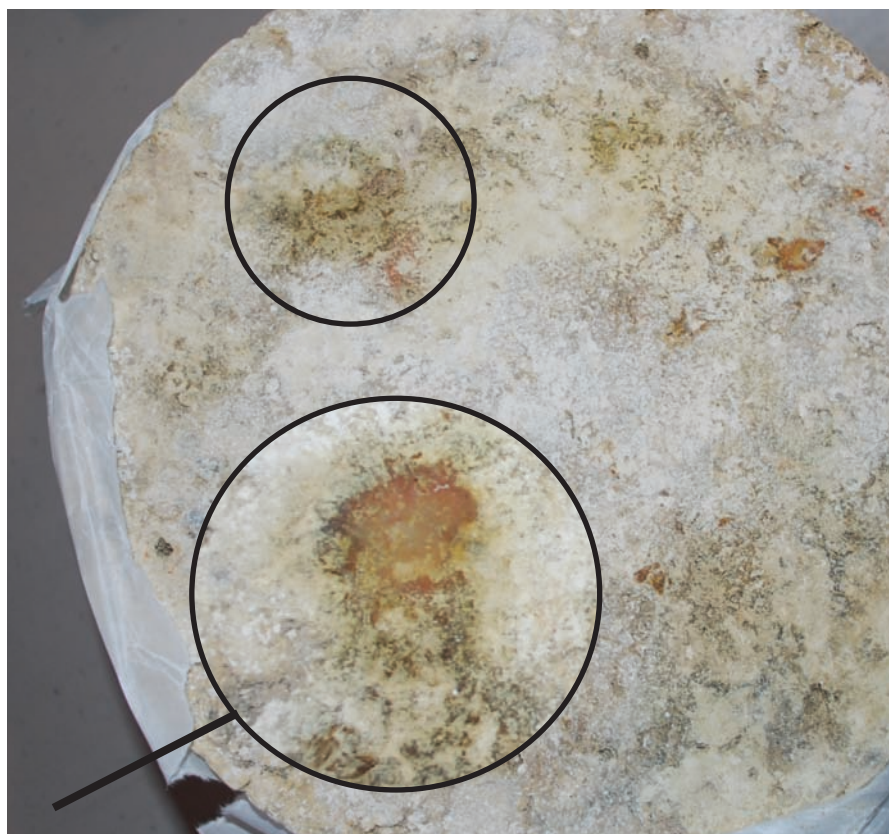
"One person said mites gave the cheese a distinct flavor," he said.

Two cheeses that intentionally use mites in the aging process are the French cheeses Tomme and Mimolette, and Milbenkase, a German cheese.

Getting Rid Of Them

The cost of ridding a cheese plant of mites can cost well over \$10,000, according to Aschebrock. One company in Minnesota spent \$50,000 to fumigate its cooler, he said.

Exterminators use methyl bromide, an odorless, colorless gas that has been used as a structural fumigant to control pests across a



While you can't see a cheese mite in the photo above, you can see damage the mites leave behind in this open-cured cheese. In this cheese, cheese mites had burrowed into the cheese and the cheese had to be discarded.

wide range of agricultural sectors. There are regulations in place to eventually phase out the use of methyl bromide over the next two years.

"You leave the cheese in the cooler, gas the room, let it sit overnight, and then let it air out," Aschebrock said. "That's where the problem comes with using methyl bromide – it'll kill a human if you get a whiff of it."

It usually takes two courses of fumigation to completely rid a cooler of mites.

"You get the adults first, wait a few days, then give them another blast to get the eggs that have hatched," Aschebrock said.

Since the use of methyl bromide has been banned due to human health hazards associated with its

use in food plants, other findings suggest that the food coating REA-DOM CBR can effectively control mite populations in cheese, Wendorff and Coudé wrote.

However, a major concern associated with use of this product is the modification of the external appearance of the cheese, which could affect consumer appeal.

For smaller infestations, I've seen positive results using lye soap and water, Aschebrock said. But if you've got dust on cheese or on your shelves, you've got an infestation and you'll probably have to fumigate, he said.

"I don't know how you can fumigate a cave, though," Aschebrock added. "That could be a pretty tough assignment."

To prevent cheese mites, the curing room should be kept clean, and shelves washed thoroughly with a caustic cleaner.

The ceiling, walls and floor should also be cleaned at least three times a year, Wendorff and Coudé advised.

Old cheese should not be permitted to stay in the aging room unless properly paraffined, and scraps of things like bandages, grain or dried fruit – anything that might serve as food for cheese mites – should not be allowed in the curing room.

Also, cheese boxes that are suspected of infection should be scrubbed, scalded and dried before they're used for cheese in a clean room.

Likewise, workers who handled infected cheese must not enter the aging room or handle the paraffined cheese until they have washed thoroughly and changed clothes.

The article on the control of cheese mites during the aging process by Coudé and Wendorff will be published in its entirety in the June issue of CDR's *Dairy Pipeline*.

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Mite Infestation

Continued from p. 1

Robert Aschebrock, cheese authority and former cheese grader with the US Department of Agriculture (USDA), saw his first case of mites when he was 16 years-old.

“After making cheese for seven years, I started work with USDA. During my early years, most cheeses handled by processors and warehouses were bandaged-style cheeses,” Aschebrock said. “Mites were everywhere.”

“We found them in coolers, on rusted-out areas of steel-jacketed cheese vats, and on any moist area in a plant with butterfat or whey residue on the equipment,” Aschebrock said.

“They were so common that at one processor’s plant, railcars used for shipping cheese were fumigated on a regular basis with methyl bromide,” he said. “Canisters of the chemical were tossed into the railcar and the doors were closed. Left overnight, the mites were killed.”

“I think it’s one of the biggest kept secrets of the industry. No one wants anyone to know they’ve got an insect infestation.”

—Robert Aschebrock

Eventually, production of bandaged-style cheese was reduced, and poly bags came into use for the storing and aging of cheese, Aschebrock said. Subsequently, mite populations and infestations in cheese plants began to decline.

“When we went into 40-pound blocks and poly liners, the mite thing kind of died down because the plastic kept mites from getting into the cheese.

“That kept the population down for many years, but what we’re seeing now is the increase of new smaller plants and farmstead cheese operations springing up across the country,” Aschebrock said.

“Many of these smaller operations are going back to bandaged-style cheese and at times, moving the cheese to a warehouse for aging,” he said.

“They may also be aging in caves, or cool, dark and damp cellars. The conditions are ideal for breeding and transporting mites,” Aschebrock continued.

Key To Growth: Humidity & Temp

A number of factors favor the development of cheese mites in an aging facility, Coudé and Wendorff wrote, particularly temperature and humidity. Mites will actively grow at temperatures between 42 degrees and 86 degrees Fahrenheit,

and the optimum temperature for growth was found to be 77 degrees Fahrenheit, with a doubling time of 2.8 days.

Relative humidity (RH) had a lesser effect than temperature, but few mites were able to complete their life cycle at less than 61 percent humidity.

Survival tests on three different surfaces – wood, wax and cheese – showed that on wood or wax, an RH of 61 percent or less limited survival. On cheese, an RH of 43 percent or less was needed to destroy the mites.

“Even in a room with low humidity, mites will live in cracked wooden storage shelves and if they get into the cheese that may have developed cracks because of the low humidity, they can live in those rooms and in cheese with lower humidity and temperatures

above 33 degrees,” Aschebrock said.

How Mites Are First Detected

The first indication of cheese mite infestation is a light gray or brown dust on the cheese surface. Residue is easier to detect on cheeses like Parmesan, Provolone, Romano, Asiago and Cheddar.

“It’s a little more difficult to see them on cheese with a moist surface like Blue cheese wheels, Gorgonzola or Brick,” Aschebrock said. “Dust is absorbed into the moisture on the cheese.”

During routine USDA inspections, the floor of the cheese cooler is dusted and the sweepings placed on a white sheet of paper. After an hour at room temperature, cheese mites will move if present.

“They move a lot faster in warmer temperature than they do

at 35 or 40 degrees,” Aschebrock said. “When they get warm, they scoot around pretty fast and they’re easy to spot.”

At USDA, we were trained to make a plant infested with mites ineligible for sale to the Commodity Credit Corporation (CCC), Aschebrock said.

“You take a look with your mite light and if you see them, the plant is automatically ineligible,” he said. “I reconfirmed that with the Washington office and they still have the same policy.”

Even if you don’t find mites on cheese – if they’re on a storage rack or a crate – the plant is deemed ineligible for government purchase, he said. However, the plant can still sell to retailers.

“I hate to say this, but I think

• See **Mite Infestation**, p. 38



For more information, circle #34 on the Reader Response Card on p. 54