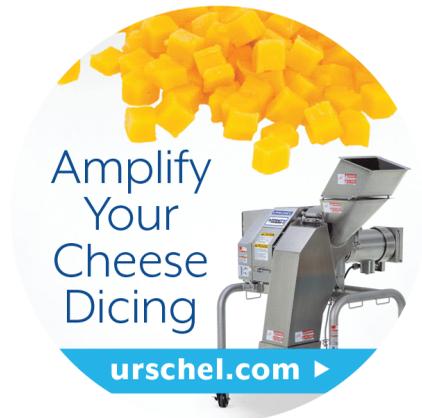




CHEESE REPORTER

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Cheese Accounted For Smaller Percentage Of Fat, Solids Use In '20

Percentage Of Milkfat Supply Used In Butter Increased; More Solids Used In Dry Products

Washington—Cheese continued to increase its use of both milkfat and skim solids last year, but it used a smaller percentage of both milkfat and skim solids than in 2019, according to figures released last Friday by USDA's Economic Research Service (ERS).

For this dairy data set, ERS provides seven tables for the supply and allocation of milkfat and skim solids by product. Those tables include product volumes; milkfat and skim solids supply and dairy industry allocation; milkfat and skim solids percent of total supply by product; and milkfat and skim solids content of products.

In 2020, the total US milkfat supply was 8.9 billion pounds. That includes the milkfat of domestic milk production plus the milkfat of imported dairy products assumed to be used as ingredients in domestically produced dairy products.

Cheese (other than cottage cheese) used 3.7 billion pounds of milkfat, the highest volume of milkfat ever used to make cheese.

The volume of milkfat used to make cheese has increased by almost 1.4 billion pounds since 2000.

Within the cheese category, since 2000, the volume of milkfat used has changed as follows: American-type cheese use has risen from 1.2 to 1.75 billion pounds; Italian-type cheese use has risen from 717.5 million to 1.26 billion pounds; and other cheese use has risen from 421.6 to 697.8 million pounds.

Last year, cheese used 41.7 percent of the total milkfat supply, down from 42.5 percent in 2019 and the lowest percentage since 2014's 41.5 percent.

Within the cheese category, since 2000, the percentage of of the US milkfat supply used has changed as follows: American-type cheese has risen from 19.3 to 19.7 percent; Italian cheese has increased from 11.6 to 14.2 percent; and other cheese has grown from 6.8 to 7.9 percent.

The milkfat content of cheese last year averaged 27.93 percent,

up from 27.86 percent in 2019 and the highest level since 2017's 27.96 percent. Within the cheese category, since 2000, the average milkfat content of cheese has changed as follows: the milkfat content of American-type cheese has declined from 32.83 to 32.71 percent; the milkfat content of Italian cheese has risen from 21.82 to 22.36 percent; and the milkfat content of other cheese has fallen from 31.76 to 30.46 percent.

Butter remained the second-leading user of milkfat in 2020; 1.7 billion pounds of milkfat was used to produce butter, up from 1.6 billion pounds in 2019.

As recently as 2001, less than 1.0 billion pounds of milkfat was used to make butter.

Butter last year used 19.5 percent of the US milkfat supply, up from 18.6 percent in both 2019 and 2018 and the highest percentage since 2013's 19.8 percent.

Other product categories that used 1.0 percent or more of the US milkfat supply last year were:

Fluid beverage milk used 11.2 percent of the US milkfat supply in

• See **Fat, Solids Use**, p. 7

USDA Hikes Fiscal 2022 Dairy Export Forecast On Higher Volumes, Values

Washington—The US Department of Agriculture (USDA), in its quarterly *Outlook for US Agricultural Trade* report released Tuesday, raised its fiscal year 2022 dairy export forecast while leaving its dairy import forecast unchanged.

USDA raised its forecast for US dairy exports during fiscal 2022 (Oct. 1, 2021 through Sept. 30, 2022) by \$200 million from its August forecast, to \$7.7 billion, on higher volumes and rising unit values, reflecting strong global import demand and tightening competitor supplies.

During fiscal 2021, US dairy exports were valued at \$7.31 billion, up 13.2 percent, or \$855 million, from fiscal 2020 and the highest value since fiscal 2014, when it reached a record \$7.41 billion.

USDA's forecast for fiscal 2022 dairy imports is unchanged from August, at \$3.3 billion. In fiscal 2021, dairy imports had reached a record value of \$3.724 billion, up 13.3 percent, or \$436 million, from fiscal 2020. The previous record for fiscal year dairy imports, \$3.49 billion, was set in fiscal 2015.

The cheese import forecast for fiscal 2022, \$1.5 billion, is also unchanged from the August forecast. Cheese imports during fiscal 2021 were valued at \$1.43 billion, up 21.9 percent, or \$257 million, from fiscal 2020.

• See **Exports Raised**, p. 16

Cheese, Dairy Projects Receive Grants Under USDA Farmers Market, Local Food Programs

Washington—The US Department of Agriculture on Tuesday announced a \$90.2 million investment in 203 projects, including some cheese- and dairy-related projects, to strengthen and explore new market opportunities for local and regional food businesses.

This funding is made possible through grant programs administered by USDA's Agricultural Marketing Service (AMS) as part of the Local Agriculture Marketing Program (LAMP): the Farmers Market and Local Food Promotion Programs (FMLFPP) and the Regional Food System Partnerships (RFSP).

• See **Grants Awarded**, p. 6

Standards Urged For Plant-Based Drinks Intended As Milk Alternatives

Lausanne, Switzerland—Nutrient standards for plant-based beverages that are marketed as alternatives to cow milk should be adopted by the food industry, by public health regulatory authorities, and by standardization bodies such as Codex Alimentarius, according to a recent article in *Frontiers in Nutrition*.

"Proposed Nutrient Standards for Plant-Based Beverages Intended as Milk Alternatives" was written by Adam Drewnowski of the Center for Public Health Nutrition at the University of Washington; Christiani Jeyakumar Henry of the Clinical Nutrition Research Center, Singapore Institute of Food and Biotechnology Innovation; and Johanna T. Dwyer of Tufts University.

Plant-based beverages (PBB) that serve as milk alternatives

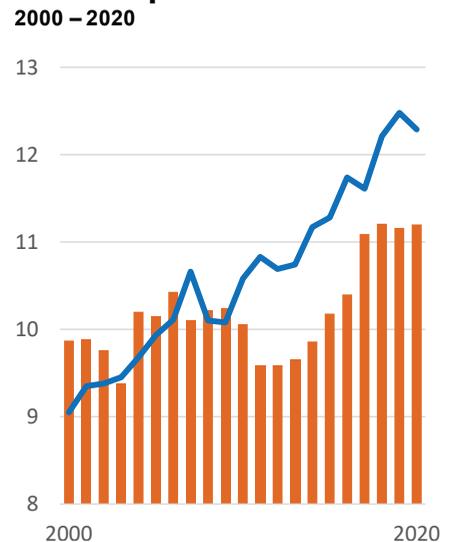
are a rapidly growing market segment, the article pointed out. Both energy content and nutritional quality of different-source PBB can be highly variable.

Nevertheless, many consumers believe that PBB milk alternatives offer the same nutritional value as dairy milk, containing the same nutrients but no lactose and less saturated fat, the article noted.

Ensuring that the new PBB products are not nutritionally inferior to milk but provide adequate nutritional value becomes a matter of public health concern, the article continued. The present position is that those PBB products that are specifically marketed as milk replacements ought to be broadly equivalent to

• See **Plant-Based Drinks**, p. 10

Per Capita Cheddar Vs. Mozzarella Consumption – 2000 – 2020





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it should be expected that Leahy has taken a keen interest in the dairy industry; after all, dairy represents somewhere around 70 percent of Vermont's total agricultural sales.

Leahy's Retirement Brings Back Dairy Compact Memories

You know a politician has been around for a long time when one of the programs he or she advocated for was terminated more than two decades ago. Such is the case with US Sen. Patrick Leahy who, as reported in this week's issue, has announced his retirement from the US Senate at the end of his current term, in early 2023.

Leahy, 81, isn't just a veteran lawmaker; he ranks first in seniority in the Senate. As such, he's also the senior-most member of the Senate Agriculture Committee, which he chaired from 1987 to 1995.

Notably, Leahy isn't the oldest US senator; he actually ranks fifth, and is also one of six octogenarians (and the second-youngest, trailing only his Vermont colleague, Bernie Sanders, who turned 80 back in September) currently in the Senate.

As a lawmaker from Vermont, it should be expected that Leahy has taken a keen interest in the dairy industry; after all, dairy represents somewhere around 70 percent of Vermont's total agricultural sales. By comparison, in Wisconsin (America's Dairyland), dairy products and milk account for just over half of all cash receipts from farm marketings.

So, how involved has Leahy been in dairy-related issues during his 46-year (and counting) Senate career? Pretty involved, by at least one somewhat simplistic measure. That is, a search of Leahy's website using the term "dairy" turns up close to 200 press release-type items, just dating back to 2008.

Since the search just turned up items dating back to 2008, there are very few mentions of the Northeast Dairy Compact found on Leahy's website. But his involvement with the dairy compact, and the importance of dairy compacts for several years a couple of decades ago, shouldn't be forgotten, even if most folks in the dairy industry under a certain age probably aren't very familiar with dairy compacts.

By way of not-so-brief background, Congress first consented to the Northeast Interstate Dairy Compact — entered into among the states of Vermont, Connecticut, Maine, Massachusetts, New Hampshire and Rhode Island — some 25 years ago, in the 1996 farm bill. Prior to that congressional consent, the Northeast Dairy Compact had been enacted into law by each of the six participating New England states.

What exactly is a dairy compact? It's basically an agreement among states to regulate the price of milk used for fluid purposes (Class I). The Northeast Dairy Compact served several functions, according to a 1999 University of Missouri study, including assuring the region of an adequate supply of milk, recognizing the cultural and economic benefits of a viable dairy industry to the region, and recognizing that the ability of the states to regulate milk prices collectively, rather than individually, is in the public interest.

Because they regulate only Class I milk, dairy compacts were popular in states with higher Class I use, but not so popular in states with lower Class I use. As a 1999 University of Wisconsin-Madison briefing paper noted, compacts raise milk prices and milk production in compact regions, decrease fluid milk consumption (due to higher fluid milk prices), and result in more milk for manufacturing usage, which reduces milk prices in regions without dairy compacts.

How popular was the Northeast Dairy Compact in New England? A producer referendum on the compact was held in May of 1997, and of the 3,158 ballots verified in that referendum, 3,146 ballots were cast in favor of the price regulation and just 12 were cast in opposition.

The Northeast Dairy Compact had what could be described as a short but impactful life. It became effective on July 1, 1997, and was terminated on Sept. 30, 2001. But, as noted earlier, the compact had

already been approved by the six New England states before it was authorized by Congress in the 1996 farm bill.

Also during its relatively short life, the Northeast Dairy Compact drew the attention of dairy leaders and politicians in a number of states outside of New England. While the original Northeast Dairy Compact was limited to the six New England states, legislation was introduced in Congress in early 2001 that would have expanded that compact to six mid-Atlantic states, and also would have created a Southern Dairy Compact that included an additional 16 states ranging from Florida and Georgia to Kansas and Missouri (the aforementioned University of Missouri study focused on the impact of Missouri joining the Southern Dairy Compact).

In other words, over half of all US states would have been covered by a dairy compact, had those efforts 20 years ago succeeded.

But that never happened. Under the original enabling legislation (the 1996 farm bill), the Northeast Dairy Compact was to have been terminated upon implementation of the federal order reforms that were also mandated under the 1996 farm bill. Those reforms went into effect in January 2000, but legislation passed by Congress in late 1999 extended the Northeast Dairy Compact until Sept. 30, 2001. And that's when it was finally terminated.

Leahy's biography also mentions that he worked with others in the Vermont congressional delegation in establishing the Milk Income Loss Compensation (MILC) program (also known as the Milk Income Loss Contract program), which was included in the 2002 farm bill and was repealed by the 2014 farm bill.

Leahy's Senate career will end in early 2023, but his successor will undoubtedly have a similar focus on dairy issues, though probably not dairy compacts specifically.

EPA Releases US Recycling Strategy; Food Waste To Be Addressed Later

Washington—The US Environmental Protection Agency (EPA) last week released the 2021 *National Recycling Strategy* to tackle major recycling challenges facing the country and to create a stronger, more resilient, and cost-effective solid waste recycling system.

The strategy is focused on enhancing and advancing the national municipal solid waste (MSW) recycling system. It is part one of a series dedicated to building a circular economy. A circular economy means an economy that involves industrial processes and economic activities that are restorative or regenerative by design, enable resources used in such processes and activities to maintain their highest value for as long as possible, and aim for waste elimi-

nation through the superior design of materials, products, and systems.

It is a change to the model in which resources are mined, are made into products, and then become waste, the strategy explained. A circular economy reduces materials use, redesigns materials and products to be less resource-intensive, and recaptures “waste” as a resource to manufacture new materials and products.

The US MSW recycling system currently faces a number of challenges, including confusion about what materials can be recycled, recycling infrastructure that has not kept pace with today’s diverse and changing waste stream,

reduced markets for recycled materials, and varying methodologies to measure recycling system performance, according to the strategy.

Advancing MSW recycling alone will not achieve a circular economy for the US, the strategy noted; recycling is only one action in the toolkit.

Recycling efforts in the US comprise more than just the processing of MSW at materials recovery facilities (MRFs) and include many other materials, such as food waste, textiles and electronics. Future strategies will address these and other aspects of a circular economy.

The National Recycling Strategy includes five strategic objectives with actions to strengthen the US recycling system:

- Improve markets for recycled

commodities through market development, analysis, manufacturing, and research.

- Increase collection of recyclable materials and improve recycling infrastructure through analysis, funding, product design, and processing efficiencies.

- Reduce contamination in the recycled materials stream through outreach and education on the value of proper recycling.

- Enhance policies and programs to support recyclability and recycling through federal and international coordination, analysis, research on product pricing, and sharing of best practices.

- Standardize measurement and increase data collection through coordinated recycling definitions, measures, targets, and performance indicators.

Whey Permeate Significantly Boosts Growth Performance Of Pigs: ADPI

Elmhurst, IL—The American Dairy Products Institute (ADPI) has made available four documents summarizing research on the use of permeate in pig feed.

ADPI, through its Permeate Task Force, supported this research on the use of permeate in pig feed.

The objectives of the research studies were to evaluate lactose level impacts on intestinal health of the piglet, as well as nursery pig performance at varying body weights, and weaning ages.

Results not only concluded that whey permeate can significantly improve the growth performance of nursery pigs, but also provided recommended ranges of inclusion levels for optimum feed efficiency.

The studies also elicited results of positive changes to gut health by inclusion of whey permeate in the diets of nursery pigs.

Finally, results of the studies suggest that increased whey permeate in the diets of pigs weaned at 21 and 25 days can improve growth performance at the identified inclusion levels suggested, the report noted.

Collectively, results provided by these studies are informative and applicable to producers and highlight the opportunities of feeding whey permeate to nursery pigs for both growth performance and gut health benefits, ADPI said.

ADPI plans to host a webinar in mid-January 2022 to discuss the results of this research in more detail.

For more information, contact Dan Meyer, technical director, ADPI, at dmeyer@adpi.org.

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How To Demonstrate Food Safety Culture

BRANDIS WASVICK

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Edition 9 of the SQF Code was implemented this past May and is now being audited at food facilities across the globe. Prior to this edition, the concept of Food Safety Culture had not been defined nor required to be part of a company's SQF program.

Now, however, the concept of Food Safety Culture is part of the required Management Commitment and Management Review clauses. So, it is no wonder that I have been receiving calls asking, "what is meant by Food Safety Culture, and how can we demonstrate it in our facility?"

The SQF Code now defines Food Safety Culture as the set of "shared values, beliefs and norms that affect mindset and behavior toward food safety in, across, and throughout an organization." In other words, it is an overarching philosophy of food safety, where leadership is forever encouraging and empowering their employees to make the right food safety choices, all the time, regardless of who is watching, and that these values should be demonstrated at all levels of the company, regardless of job title or role.

Keep in mind that SQF Auditors are trained to look at records, to conduct interviews, and to make observations. So, I tend to do the same when preparing my clients for an upcoming Audit. Knowing what counts toward "Food Safety

Culture" can help you adequately demonstrate compliance to this new requirement. Something as simple as posting signs in break rooms, hallways, and other common areas, can visually encourage a food safety philosophy, letting employees know that they are responsible for food safety and that food safety is priority.

Having mock interviews with employees before your audit will not only prepare them for potential interview questions but will also demonstrate that management makes time to educate employees about what food safety means and how everyone plays a role in it every day.

Through employee training and discussion, management can encourage employees to report events that could impact food safety, or to share ideas on how to reduce the likelihood of food safety occurrences. For example, I have seen Employee Comment Boxes being utilized for this purpose, as well as weekly five-minute team meetings to discuss any food

safety topics of relevance. Providing employee recognition for a job well done, a food safety choice well made, or for going above and beyond in food safety related actions, can also help to demonstrate an overall culture of food safety. Something like "Employee of the Month" recognition or rewards drawings could be utilized for this purpose.

When looking at records, one can find evidence for or against the concept of a Food Safety Culture. We can verify that critical control points (CCPs) are being met, and that corrective actions are being applied where needed to ensure food safety before the product leaves the facility. By reviewing the utilization of a HOLD program or Positive Release program, and by referencing microbial results, sanitation logs, and environmental monitoring programs, we can assess whether food safety has been made a priority based on how much effort is placed on those programs.

Other records worth referencing for the assessment of Food Safety Culture include Internal Inspection Reports and their associated corrective action plans. I like to see corrective action plans include both a short and a long-term plan to avoid recurrence. Training records can demonstrate whether training has been prioritized, performed regularly, and on time. Capitol Project Plans and/or Work Orders can demonstrate Food Safety Culture by showing that future improvement plans are in the budget, on a near-future schedule, and that funds are being allocated for food safety related needs.

As consultants and auditors, we are trained to interview various employees to assess whether a

• See Wasvick, p. 10

FROM OUR ARCHIVES

50 YEARS AGO

Nov. 26, 1971: Chicago—A federal hearing was held here on the proposal that the Chicago Milk Marketing Order producers be assessed five cents per hundredweight of milk for advertising and promotion. The plan would raise more than \$3 million to promote fluid milk in Chicago and Milwaukee, WI.

Washington—The revised plan of the Nixon administration for reorganizing the federal bureaucracy has guaranteed that USDA will remain, but will be reduced to serve only farmers. Under the original proposal, USDA would have been eliminated and its parts distributed among several new departments.

25 YEARS AGO

Nov. 22, 1996: Washington—The FDA published a final rule removing the standards of identity for various low fat milk, half-and-half and Cottage cheese products. The new regulation will soon change how milk is labeled, making it clear to consumers that when they buy skim milk, they're getting a fat free product, the Milk Industry Foundation reported.

Boulder, CO—Twice a week, huge tankers sloshing with up to 30,000 gallons of milk from a chemical-free herd of dairy cows barrel down Interstate 25 to Denver. Each tanker contains organic milk from 2,000 cows in Idaho by Horizon Organic Dairy here. Demand for Horizon's organic milk has more than doubled since July 1995.

10 YEARS AGO

Nov. 25, 2011: Garden City, KS—Attracting a dairy processing plant that would support southwest Kansas dairy farms is a top priority for Kansas Gov. Sam Brownback's administration, but some industry officials said the region needs more cows before the effort will succeed. More than 70,000 cows are milked in western Kansas currently.

Plymouth, WI—The Sartori Company here will auction off this year's first 20-pound wheels of Limited Edition Cognac BellaVitano, hand signed by Master Cheesemaker Mike Matucheski, on eBay. All proceeds from the auction will be donated to local food banks.

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Nightfood Wins CMAB Innovation Contest With Sleep-Friendly Ice Cream

Tracy, CA—Sleep-friendly ice cream treats designed especially for the hospitality industry, created by Nightfood Holdings, Inc., topped the Real California Milk Excelsator Competition here last week.

As champion, Nightfood has secured the first place prize of \$150,000 to invest in marketing support for the hotel launch of a new line of ice cream sandwiches.

The company has recently completed a successful pilot program with a leading global hotel chain to introduce Nightfood ice cream pints into hotel lobby shops across the US.

Nightfood management expects other hotel chains to follow, and has set a target of 7,500 hotel locations by summer.

After the first major partnership is launched, Nightfood anticipates the hotel industry will move towards making sleep-friendly snack options available for their guests.

“Targeting hotels as a channel is a brilliant strategy,” said CMAB vice president of business development Bob Carroll. “Hotel distribution would deliver paid consumer trial for and awareness of the Nightfood brand, supporting the company in multiple ways beyond revenue growth.”

Nightfood’s ice cream sandwich is being created for distribution in the hotel space, with possible supermarket introduction.

“We’re excited for the opportunity to partner with the CMAB and use these funds to establish both single-serve novelties and 16-ounce pints in hotel freezers,” said Nightfood CEO Sean Folkson. “Our goal is to help ensure that the many hotel guests who choose to snack at night are still able to achieve their best night’s sleep.”

This is the third event of its kind hosted by the California dairy industry. While prior years focused on fluid milk and snacks, the 2021 competition spotlighted products using the nutritional and flavor profiles of milk and dairy ingredients to deliver performance and recovery benefits in products ranging from sports drinks to desserts.

Nightfood was one of four innovators selected from a field of 12 semi-finalist competitors to present to a judging panel representing companies like Albertsons, Coca-Cola, Beam Suntory, My/Mochi Ice Cream, and Whole Foods Market in a live virtual pitch event.

All four finalists represented products in the frozen dessert space – a market valued at more than \$52 billion in 2020 and growing,

driven by the rising demand for better-for-you dessert options.

Alongside the other finalists, Nightfood was judged on uniqueness or innovation, taste, the ability to scale and the founding team.

Sweetkiwi came in second place and will receive \$100,000 in support for growth and distribution for its low-calorie whipped frozen Greek yogurt formulated with fiber, protein, and probiotics for better gut health.

“I’m incredibly overwhelmed and excited that we were one of the chosen winners,” said Ehime Eigbe, founder and CEO of Sweetkiwi.

The other companies in the final four included Wonder Monday – a 2020 RCM Snackcelerator finalist with a new protein keto cheesecake snack bar with no added sugar and 10 grams of protein.

ReThink Ice Cream – a low sugar, ice cream infused with fiber and sourced from lactose-free A2 dairy, also made the final four.

The final four were picked from 12 semi-finalists, initially selected from a field of 62 entries to move through the Excelsator process, receiving \$10,000 worth of support each to develop an edible prototype.

Finalists also received resources including graphic design, lab or kitchen time and elite mentorship from global marketing, packaging, investment and distribution

experts. Total value of Excelsator prize is over \$650,000.

Finalists were chosen from the semi-finalists competitors during a two-day virtual pitch event judged by a group of experts from Hershey’s, Nestle, Mars, PepsiCo Ventures Group, Amberstone Ventures, Branch Venture Group, FoodNavigator.com, Rosa Brothers Milk Company, SnackRiot, and The Save Mart Companies.

With help from CMAB, Nightfood is working to secure California-based co-packer production capacity for the ice cream sandwiches.

Production would begin when the company has secured a hotel distribution commitment for the ice cream sandwiches.

“Excelsator winners were judged as much for the founders and founding teams as for the products themselves and we had an incredible group of competitors this year,” said CMAB CEO John Talbot.

“Nightfood stood out because it really nailed the performance and recovery objective of this year’s competition, and they have a solid plan for owning the sleep space,” Talbot said. “We look forward to partnering with Sean and Ehime to bring both Nightfood and Sweetkiwi’s functional dairy desserts, fueled by Real California dairy ingredients, to the larger marketplace.”

Engineering Services

Plant Layout

Process

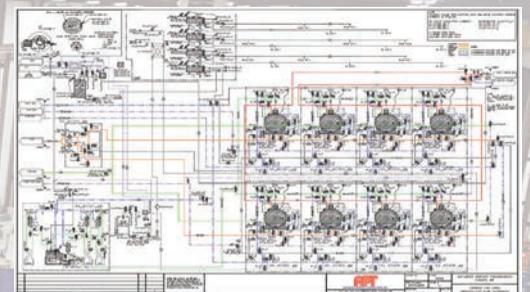
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Grants Awarded

(Continued from p. 1)

FMLFPP awarded a total of \$75.4 million to 172 projects to support the development, coordination, and expansion of direct producer-to-consumer markets and local and regional food business enterprises. FMLFPP is implemented through two components, the Farmers Market Promotion Program (FMPP) and the Local Food Promotion Program (LFPP).

FMPP awarded \$37.5 million to 84 projects to support direct producer-to-consumer marketing projects. Among the recipients: the Washington State Cheesemakers Association, which received an award of \$334,795.49 for community development, training, and technical assistance.

Washington state is home to 53 licensed cheese makers, including farmstead cheese makers who are dairy farmers, artisan cheese makers who purchase milk for value-added cheesemaking, and industrial-level cheese plants.

Most Washington cheese makers produce on a small or medium scale, selling less than \$250,000 annually. Many of their cheeses are not available in stores; they sell exclusively from farm stands or farmers' markets.

The Washington State Cheesemakers Association (WASCA) was founded in 2015 to support cheese makers through education,

promotion, and collaboration. FMPP funds will assist WASCA in efforts to educate consumers about the variety and quality of cheeses made in Washington.

Many consumers became aware of the importance of their local food economy during the coronavirus pandemic. The WASCA would like to build on that momentum to help the state's cheese makers expand their market reach and attract more customers.

The project that received USDA funding will result in increased sales to cheese makers and dairy farmers producing cheese milk by way of strengthening cheese makers' ability to draw long-term sales by providing them educational trainings in food safety, regulations, and cheesemaking science; establishing a "Washington Cheese Month" celebrated with in-person and virtual events to engage cheese makers and farmers, consumers, and vendors; building a "Meet the Cheesemakers" campaign to connect consumers directly with cheese makers via agritourism, festivals, educational seminars and tastings, and other communications; and developing a retail marketing campaign for Washington cheeses sold in grocery stores, including a cheese monger education program and merchandise signage.

The Local Food Promotion Program awarded \$37.7 million to 85 projects to develop, improve,

and expand local and regional food business intermediary supply chain activities, including processing, distribution, aggregation, and storage of locally or regionally produced food products.

Maine Organic Milk Company, LLC, was awarded \$646,663 for its implementation project.

While all of Maine's dairy farmers face challenges, the nearly one-third of commercial-scale dairy farms selling into the organic market face additional challenges, as none of the national organic processors operate in-state processors.

In 2018, several Maine organic dairy farms were dropped by their processor, which prompted Maine Farmland Trust to apply for and receive a LFPP planning grant to assess the feasibility of launching a Maine organic milk brand to build consumer loyalty and demand for Maine-made organic milk. The study concluded there is high consumer interest in a Maine organic milk brand, and also determined that processing infrastructure and milk supply logistics support a new brand launch.

As a result, earlier this year, the Maine Organic Milk Company (MOM Co.) was founded. This project will fill a void in the marketplace for Maine-branded

organic dairy products, ensuring a market-driven need for Maine's organic dairy farms. MOM Co. will source milk from CROPP Cooperative/Organic Valley), which will then transport the raw milk using its in-state trucking mechanism to Pineland Farms Dairy Company in Bangor, where it will be co-packed into dairy products branded as Maine Organic Milk Company to be distributed through retail.

M3 Coop Feasibility, LLC, of Maryland will receive \$196,563.40 for its planning project for a mid-Atlantic meat and milk cooperative, the goal of which is to connect regional producers to the large consumer market in nearby cities through the creation of a cooperative (M3 Coop). M3 Coop will aggregate products from its members in an effort to overcome existing barriers through shared governance, processing, marketing and distribution, education, and technical support.

Serving in the vital role as a mid-tier value-added aggregator, M3 Coop will catalyze the evolution of the mid-Atlantic food system and increase the economic viability of small dairy and livestock farming in the region while increasing the resilience of the regional food system.

Darifair Foods Announces New Name: Rubix Foods

Jacksonville, FL—Darifair Foods, a provider of flavor and functional ingredients for food manufacturers and restaurants, recently announced a new company name and brand identity: Rubix Foods.

The change recognizes that the company has evolved beyond its roots and serves a variety of busi-

ness-to-business customers with a full spectrum of food solutions.

The company said its current and future expertise is as a full-service problem-tackling partner across the gamut of culinary, scientific, marketing and logistics.

The Rubix identity went live earlier across all the company's platforms and will appear on the 50,000-square-foot corporate headquarters and Innovation Center.

For more information, visit www.rubixfoods.com.

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Fat, Solids Use

(Continued from p. 1)

2020, down from 11.3 percent in 2019 and down from 18.0 percent in 2000. Last year, 994.9 million pounds of milkfat was used in fluid milk products, up from 974 million pounds in 2019 and the highest level since 2010's 1.01 billion pounds. The average milkfat content of fluid milk last year was 2.15 percent, up from 2.10 percent in 2019 and the highest level in the 21 years covered by the ERS data.

Frozen dairy products used 7.5 percent of the US milkfat supply last year, unchanged from 2019, up from 7.4 percent in 2018 but down from every year before. In 2020, 665.7 million pounds of milkfat was used in frozen dairy products, up from 648.6 million pounds in 2019 and the largest volume since 2007's 667.9 million pounds. The average milkfat content of frozen dairy products last year was 9.33 percent, up from 9.09 percent in 2019 and the highest level since 2002's 9.42 percent.

Sour cream used 3.2 percent of the milkfat supply, unchanged from each of the three previous years and up from 2.1 percent in 2000. Last year, 282.7 million pounds of milkfat was used in sour cream, up from 275.6 million pounds in 2019 and 129.9 million pounds in 2000. The average milkfat content of sour cream has been 19.35 percent every year since 2003.

Other dairy product categories, and the percentage of the US milkfat supply they used in 2020, were as follows: yogurt (nonfrozen), 0.8 percent; dry milk products, 0.7 percent; evaporated and condensed milk, 0.7 percent; whey products, 0.4 percent; cottage cheese, 0.2 percent; and residual, 13.8 percent.

ERS explained that "residual" includes uses of products for which data are not readily available; any inaccuracies in production, utilization estimates, or conversion factors; and plant and shipping losses.

Key Uses Of Skim Solids

In 2020, the total US skim solids supply was 20.01 billion pounds. Fluid milk was the largest user of skim solids last year, although the volume of skim solids used in fluid milk products, 4.23 billion pounds, was down 22.2 million pounds from 2019 and down 717.4 million pounds from 2000.

Last year, fluid milk used 21.1 percent of the total skim solids supply, down from 21.7 percent in 2019 and the lowest percentage in the 21 years covered by the ERS data. As recently as 2001, fluid milk used more than one-third of the total skim solids supply (33.8 percent that year).

The average skim solids content of fluid milk was 9.12 percent in 2020, down from 9.16 percent in 2019 but up from 8.95 percent in 2000.

Cheese was the second-largest user of skim solids in 2020; a record 3.73 billion pounds of skim solids was used to produce cheese. The volume of skim solids used to produce cheese has grown by almost 1.5 billion pounds since 2000.

In 2020, cheese used 18.6 percent of the total skim solids supply, down from 19.0 percent in both 2019 and 2018 but up from 15.5 percent in 2000.

The average skim solids content of cheese in 2020 was 28.12 percent, down from 28.22 percent in 2019 and the lowest percentage since 2015's 28.11 percent.

A total of 3.13 billion pounds of skim solids was used in whey products in 2020, down from 3.26 billion pounds in 2019. Skim solids used in whey products had totaled 1.65 billion pounds in 2000.

Whey products used 15.6 percent of the total skim solids supply, down from 16.7 percent in 2019 and the record high of 18.8 percent in 2014. As recently as 2002, whey products used 10.0 percent of the total skim solids supply.

Dry milk products were the fourth-largest user of skim solids in 2020; a record 2.54 billion pounds of skim solids was used in dry milk products, up from 2.24 billion pounds in 2019. In 2020, dry milk products used 12.7 percent of the total skim solids supply, up from 11.4 percent in 2019.

Other product categories that used 1.0 percent or more of the US skim solids supply last year were:

Frozen dairy products used 3.6 percent of the skim solids supply down from 4.0 percent in 2012 and 5.0 percent in 2000. In 2020, 715.5

million pounds of skim solids were used in frozen dairy desserts, up from 709.9 million in 2019.

Yogurt used 3.5 percent of the skim solids supply last year, up from 3.4 percent in 2019. Last year, 693.1 million pounds of skim solids were used in yogurt products, up from 662.8 million pounds in 2019 but down from a record 701.6 million pounds in 2014.

Evaporated and condensed milk used 2.5 percent of the skim solids supply, down from 2.8 in 2019. A total of 495.8 million pounds of skim solids was used last year.

Other dairy product categories, and the percentage of the US skim solids supply they used in 2020, were: sour cream, 0.6 percent; cottage cheese, 0.5 percent; butter, 0.2 percent; and residual, 20.7 percent.

Open Invitation: Acquisitions

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OBITUARIES

Charlie Johnson Dies; Was Longtime Cheese Cutting, Packaging Expert

Minocqua, WI—Charles H. “Charlie” Johnson, 94, of Minocqua, WI (formerly of Plainfield, WI), whose life revolved around the cheese industry for more than 60 years, passed away on Monday, Nov. 22. He was 94 years old.

Johnson started his cheese industry career in 1950, making cheese in Plainfield, WI. After that, he worked for C.J. Berst and Co. (now AMPI) in Portage, WI, Marathon Cheese for two years, and North Central Engineering for two years.

He was the former owner of C. Johnson Cheese Equipment and Econo Cheese Equipment. He also owned two different Charles Fine Cheese stores, one in Plainfield and one in Hazelhurst.

In 2012, Johnson received the Distinguished Service Award from the Wisconsin Cheese Makers Association for his significant contributions to the success of the US dairy industry.

During his career, Johnson worked with many cheesemaking and packaging facilities and designed and built hundreds of specialized pieces of equipment to fill the needs of companies from small to very large. He worked with these companies to reduce trim and giveaway while increasing output.

Johnson was the first to design and build a two-way 40-pound horizontal cheese cutter; he was also instrumental in the develop-

ment of making 640-pound blocks of cheese, and then designed and built the first cutters to accommodate these blocks, cutting them into consumer-sized pieces.

RETIREMENTS

Food Safety Chief Steve Ingham To Retire From DATCP

Madison—Steve Ingham, administrator for the Division of Food and Recreational Safety at the Wisconsin Department of Agriculture, Trade and Consumer Protection (DATCP) announced his retirement, effective Dec. 16, 2021.

Ingham has served 14 years as Wisconsin’s top food safety official, working under five different DATCP secretaries. His accomplishments include leading 227 food and recreational safety employees across Wisconsin; guiding the transfer of restaurant, lodging, and recreational regulatory programs to DATCP from the Wisconsin Department of Health Services; and supervising Wisconsin’s efforts to become the first state to achieve full compliance with federal manufactured-food safety program standards.

“Leading a top-notch food and recreational safety regulatory program at DATCP has been the opportunity of a lifetime,” Ingham said.

Prior to joining DATCP in 2008, Ingham held faculty positions in food science at Louisiana State University from 1988-89, the University of Saskatchewan from 1989-93 and the University of Wisconsin-Madison, 1993-2008, and 2010-11.

He has served on the National Conference on Interstate Milk Shipments (NCIMS) through the Executive Board and several food safety-related committees. Ingham also served on the National Advisory Committee on Microbial Criteria for Foods.

Due to Ingham’s retirement, DATCP is seeking a replacement to lead its Division of Food and Recreational Safety.

Sen. Patrick Leahy, Key Backer Of Northeast Dairy Compact, Organic Foods, To Retire

Washington—US Sen. Patrick Leahy (D-VT), chairman of the Senate Appropriations Committee and the senior-most member of the Senate Agriculture Committee, is retiring after his current term expires in early 2023.

Leahy was first elected to the US Senate in 1974, and currently ranks first in seniority in the Senate. He chaired the Senate Agriculture Committee from 1987 through 1995.

During his Senate career, Leahy played a crucial role in enactment and implementation of the Northeast Interstate Dairy Compact and also helped establish the Milk Income Loss Compensation (MILC) program.

Leahy is also known as the “father” of the national organic standards program and was the author of the 1990 Organic Foods Production Act. He was the first recipient, in 1997, of the Organic Trade Association’s Organic Leadership Award.

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Continued from p. 4

culture of food safety is being encouraged “from the top, down”. Interview questions that employees may receive might sound something like this: “Does upper management also follow GMPs in production and storage areas? What happens when someone violates a food safety procedure? Can anyone describe a time when a food safety issue occurred and what management did about it? Can anyone provide an example of a time when additional resources were needed, and were those resources provided in an appropriate time frame?” Having mock interviews with employees before your audit will not only prepare them for potential interview questions but will also demonstrate that management makes time to educate employees about what food safety means and how everyone plays a role in it every day.

While interviewing employees, most auditors will simultaneously be making observations. I encourage the SQF Practitioners and Management to do the same in their daily routines. The auditor may look for proper labeling of chemicals, ingredients, packaging, in-process and finished goods, and then interview employees about traceability to assess their understanding of why lot code tracking is important.

When talking to employees who come into direct contact with food, they may ask about what they would do if they dropped product on the floor, or if they got cut and started bleeding onto equipment or product.

They may also compare the employee’s answers to the verbiage used in the SOPs to assess the adequacy of the training program.

So when preparing for your next audit, ask yourself, “How can we show Food Safety Culture? Are employees being encouraged to react appropriately during food safety situations? And if so, how could we show that? In what ways can we recognize employees for positive food safety decisions made? Is management providing an overall message that encourages food safety from the top, down? How can we show that? Can we add more signage to break rooms? Are Capitol Project Plans being documented for upcoming food safety related needs? If my employees were asked about the food safety objectives at our facility, would they know what to describe?” etc.

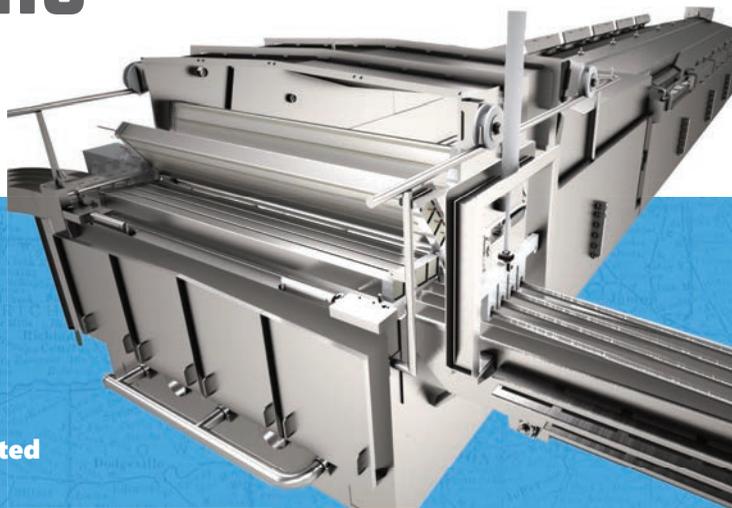
I believe, with a little preparation and understanding of what counts toward “Food Safety Culture”, that you can adequately demonstrate compliance to this new requirement in the Edition 9 of the SQF Code. **BW**

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Shepherd's Whey Sweeps ADGA Cheese Contest Winning Best In Show, Reserve

Tucson, AZ—Shepherd's Whey Creamery of Martinsburg, WV, took home Best in Show and Reserve Best in Show honors here at the recent 2021 American Dairy Goat Association (ADGA) Cheese Competition.

Shepherd's Whey Potomac Sunrise – a washed rind style aged three to nine months – was named Best in Show.

The title of Reserve Best in Show went to Shepherd's Whey spring seasonal Beet Mint Chevre – locally-sourced beets roasted in balsamic vinegar, mixed with fresh mint and Shepherd's Whey Lilly's Chevre.

The contest was held in conjunction with ADGA's annual convention here.

Oregon-based cheese consultants Marc Bates and Tami Parr served as judges.

First, second and third place winners in each of the nine Commercial classes are as follows:

Unflavored Soft Cheese

First place: Erika McKenzie, Pennyroyal Farmstead Cheese, Boonville, CA, Laychee

Second place: Sarah Williams, Bees Knees Farm, West Point, VA, Chevre

Third place: Nicolette Grill, Mojave Gold, Inc., Mojave Desert, Southern California, Chevre

Flavored Sweet Cheese

First place: Erika McKenzie, Pennyroyal Farmstead, Laychee with Blueberry

Flavored Savory Cheese

First place: Suzanne Behrmann, Shepherd's Whey, Beet Mint Chevre

Second place: Sarah Williams, Bees Knees, Chevre with Garlic & Chive

Third place: Erika McKenzie, Pennyroyal Farmstead, Laychee with Chives

Surface Ripened Unflavored Penicillium Candida

First place: Suzanne Behrmann, Shepherd's Whey, Snow Button

Second place: No Award Given

Third place: Erika McKenzie, Pennyroyal Farmstead, Velvet Sister

Surface Ripened Unflavored All Other Cheese

First place winner: Erika McKenzie, Pennyroyal Farmstead, Bollie's Mollies

Second place: No Award Was Given

Third place: No Award Given

Blue Veined Cheese

First place: No Award Given

Second place: No Award Given

Third place winner: Erika McKenzie, Pennyroyal Farmstead, Boont's Blue

Semi Soft Unflavored Cheese

First place: Suzanne Behrmann, Shepherd's Whey, Potomac Sunrise

Second place: No Award Given

Third place: Erika McKenzie, Pennyroyal Farmstead, Two Month Boont's Corners

Hard Unflavored Cheese

First place: Erika McKenzie, Pennyroyal Farmstead, Reserve Boont's Corner

Second place: No Award Given

Third place: No Award Given

Confections

First place: Stacy Roussel, All We Need Farm, Houston, TX, Goat Milk Popsicles

Second place winner: Sarah Williams, Bees Knees Farm, Caramel

Third place: No Award Was Given

Cheese maker Tatiana Deters earned Best in Show in the American Dairy Goat Association Amateur Competition with a farmstead goat cheese entry.

Tatiana Deters also came in second place with a Blue cheese entry in the American Dairy Goat Association Amateur Competition.

Cheese Dip Maker Pancho's Acquired By Sabrosura Foods

Bloomington, MN—Sabrosura Foods, LLC, a marketer and distributor of branded Hispanic food products, last week announced the acquisition of Pancho's Mexican Foods, Inc., a manufacturer of cheese dips.

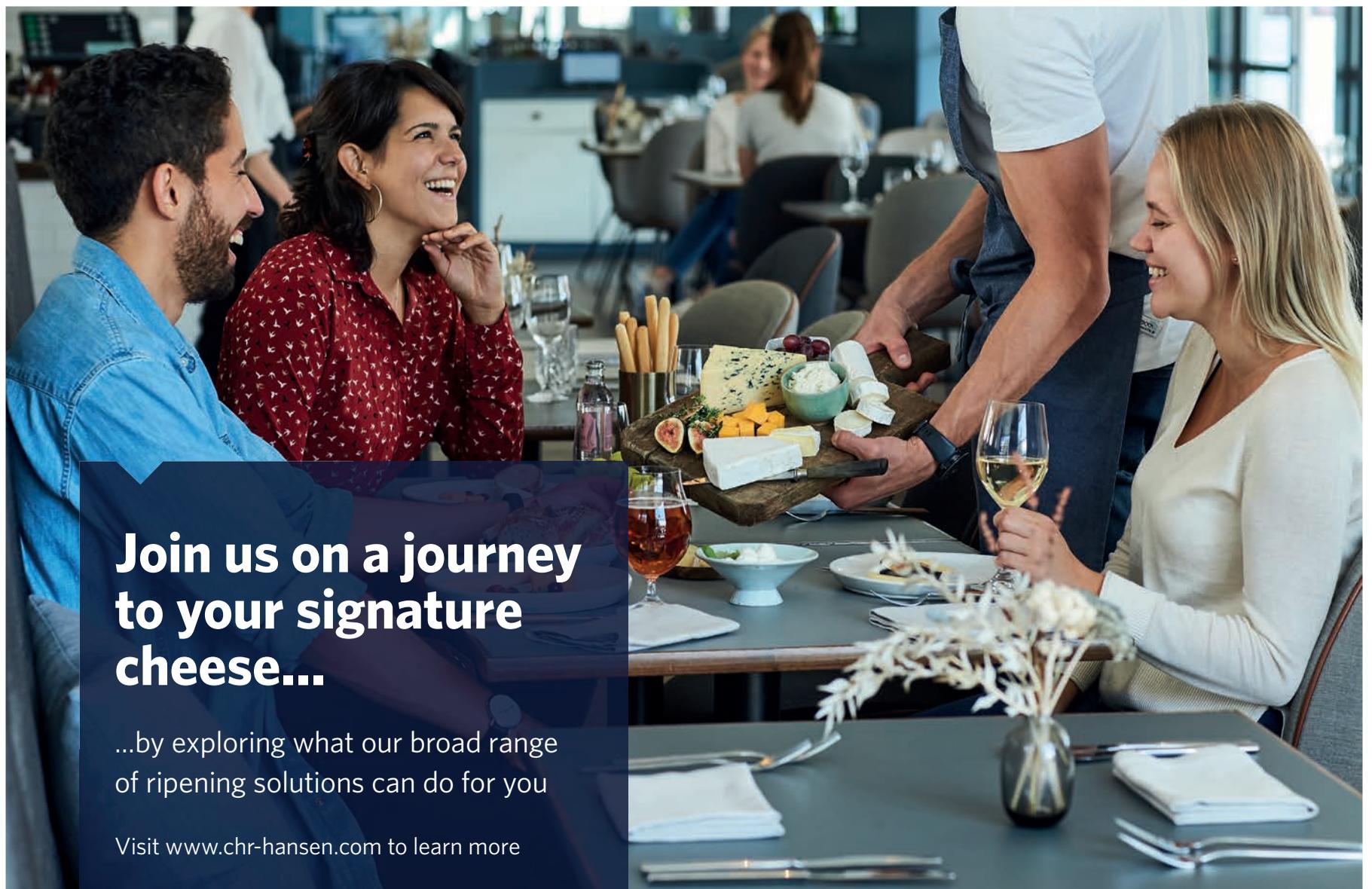
Terms of the transaction were not disclosed.

Founded in 1956, Pancho's gained its popularity as a local Memphis favorite before evolving into a leading brand in the refrigerated queso dip category, now found at more than 1,200 stores nationwide. Pancho's today offers a variety of dips, including Original Queso Dip, Chipotle Queso Dip and White Queso Dip.

"We couldn't be more excited to join the Sabrosura Foods family," said Brenda O'Brien, president of Pancho's Mexican Foods, Inc. "Pancho's has been in my family for 65 years, and we have been so grateful to bring people together over delicious food."

Pancho's is joining the Sabrosura family of cheese and other food brands, which includes El Viajero, La Morenita, Reynaldo's, Queseria Caribe, and Bio Salud!

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Plant-Based Drinks

(Continued from p. 1)

cow milk in terms of nutritional value.

Unsweetened lowfat (1 percent) milk provides 3.3/100 grams of protein; about 5/100 grams of lactose; and 0.95/100 grams of fat, of which 0.57 gram is saturated fat. By contrast, PBB milk alternatives generally contain about 1/100 gram plant protein and can vary widely in their content of added sugar and saturated fat. These products are typically fortified with varying amounts of calcium, vitamin D, and vitamin A and less often with vitamin E, vitamin B12, and zinc.

Currently, pediatricians don't recommend PBB milk replacements for children mainly due to inadequate protein content, low protein quality, and other nutrition shortcomings, the article said.

Any proposed nutrition standards for PBB milk alternatives would need to address, at a mini-

mum, desired energy content, optimal amounts and quality of the plant protein(s), limits on total or saturated fat, added sugar and salt, and the overall strategy for fortification with vitamins and minerals, the article stated.

The desired maximum energy content for PBB milk replacements was set at 85-100/100 grams or 170-200 kcal per serving.

These energy levels correspond roughly to 10 percent of daily energy intakes.

Protein Amount And Quality

Milk is one of the main contributors to daily protein intakes for children, the article noted. The protein content of 1 percent dairy milk is about 3.3 grams/100 grams, while the protein content of most PBB milk alternatives is generally below 1 gram/100 grams.

Of all the nutrients examined, the protein gap between PBB and cow milk was the most difficult to address.

The proposed minimum protein content for PBB milk replacements was set at 2.2 grams of protein per 100 grams.

However, the authors' aspirational target for "best of class" products was 2.8 grams/100 grams or 5.6 grams protein per 200-gram serving, corresponding to 11.2 percent of daily value.

Concern with protein quality from plant sources was another issue. The Protein Digestibility Corrected Amino Acid Score (PDCAAS) is a standard measure of protein quality, although the UN Food and Agriculture Organization (FAO) now favors the Digestible Indispensable Amino Acid Score (DIAAS), which is reported to better account for the bioavailability of amino acids.

PDCAAS close to 1.0 can satisfy growth requirements for children. Milk proteins have a PDCAAS score of 1.0. With the exception of soy proteins (0.91-0.95), individual plant proteins have lower

scores. The authors' position was that a PDCAAS score of 0.8 to 0.9 could be achieved by blending cereal- and legume-based proteins.

The proposed amount of added sugar in PBB should approximately match the level of naturally occurring sugar in milk; that is, about 5 grams/100 grams. Milk contains no soluble or insoluble fiber. The proposed maximum amounts for added sugar were therefore 5.3 grams/100 grams for children and 6.2 grams/100 grams for adults.

Attempting to remove all the fat in oilseed-source PBB to match skim milk poses technical challenges, since many such products derive their milky white appearance and creamy consistency from extracted plant oils held in suspension by stabilizers and emulsifiers. The authors' perspective was that PBB milk replacements ought to limit saturated fat to less than 0.75/100 grams, corresponding roughly to lowfat milk.

The authors' goal was to ensure that PBB milk alternatives were not nutritionally inferior but contained adequate amounts of those vitamins and minerals that were characteristic of the dairy group. The proposed minimum standard for fortification with vitamins and minerals was set at 15 percent Daily Value per PBB serving. PBB milk alternatives ought to be fortified with calcium, vitamin D, riboflavin, vitamin B12, and vitamin A, the article said.

PBB are "clearly being marketed as more sustainable and planet-friendly than dairy milk," but their production involves some complex food technology and processing, so that PBB milk alternatives are for the most part ultra-processed foods, the article stated.

The authors' conclusion was that, except for fortified soy milks, PBB should not be assigned to the dairy group in the US, or in recommendations for dairy in dietary guidelines in various countries, until some voluntary standards are developed and adopted by the food industry.

Such nutrient standards would be the first step toward developing standards of identity for the PBB milk alternatives.

Nutrient density of new generation PBB could be improved by using multiple plant proteins, healthy fats, new sweeteners, and fortification with vitamins and minerals to address local needs, the article stated. There are opportunities to create PBB from under-exploited cereals and legumes, and novel plant lipids include those from algal, rice bran oil, jojoba, sal seed, and shea butter. New PBB could also contain bioactive compounds, including flavonoids, polyphenols and sterols.

"However, such products ought not to be called 'milk,'" the authors stated.



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Imagindairy, Maker Of Animal-Free Proteins, Closes \$13 Million Seed Round

Tel Aviv, Israel—Imagindairy, Ltd., which is creating milk proteins that it says are identical to those from cows, recently announced completion of a \$13 million seed round.

With precision fermentation, Imagindairy creates milk proteins that are indistinguishable from the real thing. The company said its proprietary technology allows manufacturers to offer cow-free milk and dairy products with all the nutritional values of dairy milk.

“The market is eager to develop new dairy analogs based on our animal-free proteins,” said Eyal Afegan, Ph.D., co-founder and CEO of Imagindairy. “Once we reach commercialization, more consumers will be able to enjoy eating animal-free dairy products. It’s hard for people to make big changes, especially when it comes to the foods they enjoy, but when there’s an alternative with the same flavor and experience that is more aligned to their values, it becomes easy.”

The funding was led by MoreVC, a seed stage investor in Israel. Also joining this round: Strauss Group, Entree Capital, S2G Ventures; Collaborative Fund, New Climate Ventures, Green Circle Foodtech Ventures; Emerald Technology Ventures and Pierre Besnainou. This round includes a pre-seed investment by Strauss Group, FoodSparks by PeakBridge, CPT Capital, and Entree Capital earlier this year.

The company will invest the funds in expanding its facilities, increasing its professional team, and boosting its research and development capacity to meet the demands of its partners.

“Imagindairy’s innovative technology allows dairy companies to develop new products or reformulate existing products, without involving animals and with a dramatic reduction in carbon footprint,” said Glen Schwaber, MoreVC partner. “They have the technology to produce the dairy products of the future that consumers want today.”

“We evaluated Imagindairy’s proprietary, deep-tech platform and immediately recognized its huge potential,” said Eran Bielski, general partner at Entree Capital. “Imagindairy successfully addresses the biggest limitation of precision fermentation technology: cost effective animal-free milk protein production.”

“This is innovative technology that can help solve world hunger in our growing population,” said Eyal Shimoni, CTO for Strauss Group, an Israeli food company.

Arla UK, Starbucks To Develop Sustainable Dairy Sourcing Blueprint

Leeds, England—Starting in January 2022, Arla Foods and Starbucks will develop a three-year pilot to create a new sustainable dairy sourcing blueprint for Starbucks.

The pilot will see Starbucks work directly with 14 Arla farmers in the United Kingdom to identify innovative new farming practices and industry-leading methods to significantly reduce the emissions associated with dairy production. Starbucks and the selected Arla farmers will focus on three key areas: environmental stewardship, animal health and welfare, and

ensuring profitability for the farmers through the Arla UK 360 farm standards program.

“This partnership with Arla and the dairy farming community underpins our commitment to produce high quality and responsibly sourced products,” said Alex Rayner, general manager at Starbucks UK. “Starbucks and Arla share a commitment to upholding the highest standards in agriculture. As a farmer-owned business, Arla’s approach — including their cooperative principles — make them the right partner for us.

“Purchasing sustainable dairy is integral to our work expanding our environmentally friendly menu options, while enhancing the Starbucks experience,” Rayner continued. “Customizing beverages has and always will be at the heart of Starbucks, and this program will

help ensure that best practice carbon reduction strategies are being implemented across our entire milk and dairy alternative selection.”

“It is a huge testament to the sustainable farming practice of our owners that Starbucks has chosen Arla to support its sustainable sourcing development work,” said Graham Wilkinson, group senior agriculture director at Arla Foods.

Mark Glanvill is one of the dairy farmers who has been selected to be part of the program.

“Whilst Arla’s dairy farmers are at the forefront of reducing emissions of dairy, it has to be recognized that this comes at a cost to production, our action can only be as fast as our finances allow,” Glanvill said.

Starbucks will also be working with scientists from the Nature Conservancy.

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COMING EVENTS

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Preventive Controls Qualified Individual Training Course Is Dec. 7-9 In Madison

Madison—Kara Baldus, food safety program manager for Hydrite Chemical, will lead the Preventive Controls Qualified Individual (PCQI) Training Workshop here Dec. 7-9 at M3 Insurance.

M3 Insurance has teamed up with the Wisconsin Manufacturing Extension Partnership (WMEP) to offer the workshop, which provides attendees with necessary certification for the written food safety plan at their respective food processing facility.

It will follow the FDA-approved curriculum developed by the Food

Safety Preventive Controls Alliance (FSPCA).

Exercises are designed to provide practical details covering all the required components of the written food safety plan mandated within the Preventive Controls for Human Food (PCHF) rule.

Baldus will outline the development of process, allergen, sanitation and supplier preventive controls; how to create a recall plan; and the latest record-keeping requirements.

She will also cover current good manufacturing practice and other

WDPA Event Calendar Announces Important Dates For Next Year

Middleton, WI—The Wisconsin Dairy Products Association (WDPA) has released its 2022 Calendar of Special Events, featuring dates and locations for important annual functions.

The WDPA will hold its yearly golf outing on May 11 at the Northern Bay Golf Course in Arkdale, WI.

The Association will return to Door County's Landmark Resort in Egg Harbor July 11-12 for the 2022 Dairy Symposium.

Contest judging for WDPA's World Dairy Expo Championship Dairy Product Contest will be held Aug. 23-25 at the Madison College of Culinary Arts.

Contest winners will be lauded at a special awards reception and auction here Oct. 4 at the Alliant Energy Center.

The event will be held in conjunction with World Dairy Expo here Oct. 2-7 at Alliant's Veterans Memorial Coliseum.

More information will be available regarding each event in the coming months.

Visit www.wdpa.net for coming details and registration information.

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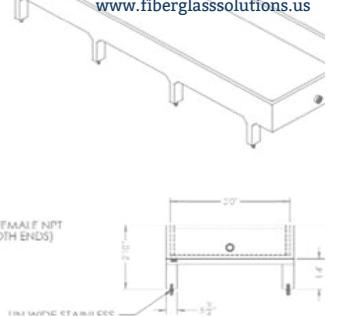
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prerequisite programs, hazard analysis and preventive controls determination.

Those who would benefit from the workshop include company owners; food safety and regulatory affairs directors; plant operations, quality assurance/quality control and HACCP Managers; sanitation managers and food microbiologists.

Cost of the workshop is \$425 per student, and includes registration, course materials, lunch and breaks each day.

To register online, visit www.m3ins.com/events/preventive-controls-qualified-individual-training-workshop.

PLANNING GUIDE

Jan. 23-26, 2022: Dairy Forum, J.W. Marriott Desert Springs Resort & Spa, Palm Desert, CA. Registration now available online at www.dairyforum.org.

Jan. 30-Feb. 1: PLMA Annual Private Label Trade Show, Donald E. Stephens Convention Center, Chicago, IL. Visit www.plma.org.

Feb. 6-8: New Date & Location - Winter Fancy Food Show, Las Vegas Convention Center, Las Vegas, NV. Visit www.specialty-food.com for more information.

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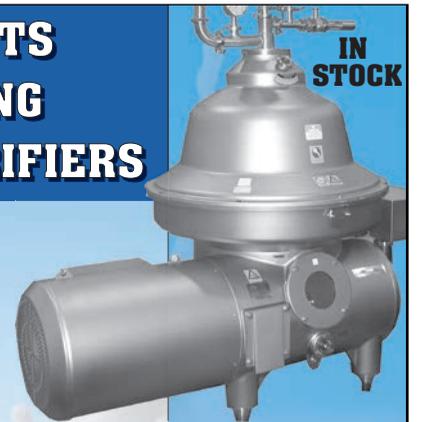
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Assistant Cheesemaker



Blakesville Creamery, located in Port Washington, WI, has an immediate opening in our brand new state-of-the-art cheesemaking facility. Established in 2020, we are focused on making soft-ripened goat cheeses from the milk of our 1200-head goat dairy, located on the same property as the creamery. We are looking for a dynamic individual who wants to grow with our company and is flexible in their role and responsibilities.

Job Description:

The Assistant Cheesemaker will work closely with our head cheesemaker but responsibilities will also include running our cheesemakes; the care and affinage of our cheese; order fulfillment; training other employees in SOPs and GMPs; and more. This is a full-time position requiring approximately 45-55 hours per week and requires attention to detail and meticulous record keeping.

Qualifications:

Candidates that hold a HACCP and/or PCQI certificates, a Wisconsin Cheesemaker's license, and/or a Wisconsin Pasteurizer Operator's license are sought but not necessary.

Compensation and Benefits:

- \$45,000-\$55,000 annually, depending on qualifications and experience
- 401K with 5% employer matching contribution
- Health insurance with 50% employer contribution
- **Professional development:** we will pay for your WI cheesemakers license and any training/certificates required to retain license

Interested Candidates:

Submit a Resume with Email Letter of Interest to:

Veronica Pedraza

Blakesville Creamery

General Manager and Head Cheesemaker

blakesvillecreamery@gmail.com

www.blakesvillecreamery.com



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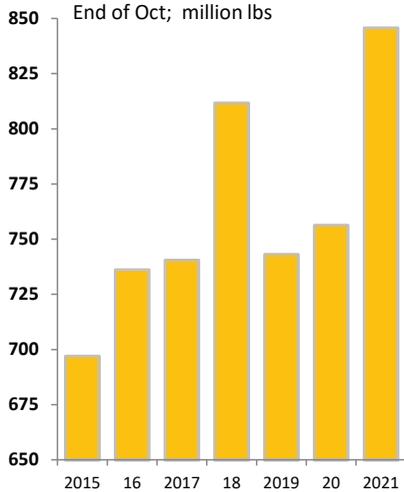
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Dairy Product Stocks in Cold Storage

TOTAL STOCKS AS REPORTED BY USDA (in thousands of pounds unless indicated)

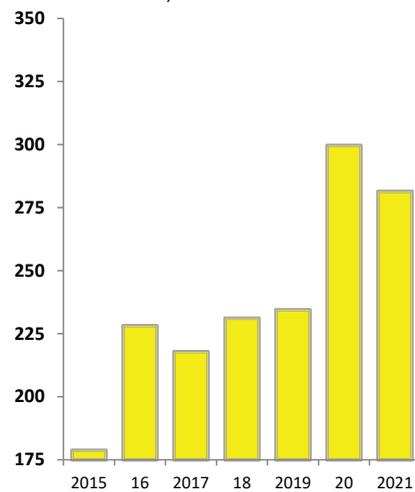
	Stocks in All Warehouses			October 31, 2021 as a % of		Public Warehouse Stocks
	Oct 31 2020	Sept 30 2021	Oct 31 2021	Oct 31 2020	Sept 30 2021	Oct 31 2021
Butter	299,731	324,395	281,483	94	87	265,805
Cheese						
American	756,168	844,115	845,633	112	100	
Swiss	20,149	21,879	21,433	106	98	
Other	565,111	591,859	584,224	103	99	
Total	1,341,428	1,457,853	1,451,290	108	100	1,157,818

American-Type Cheese Stocks



Butter Stocks

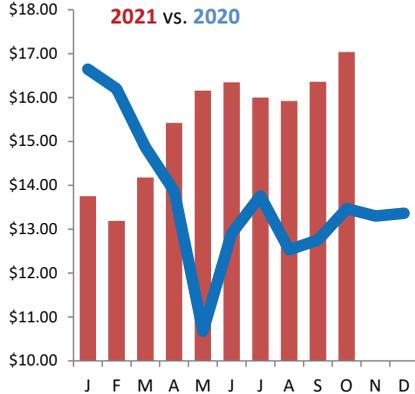
End of Oct, million lbs.



Class 2 Milk Price



Class 4 Milk Price



DAIRY FUTURES PRICES

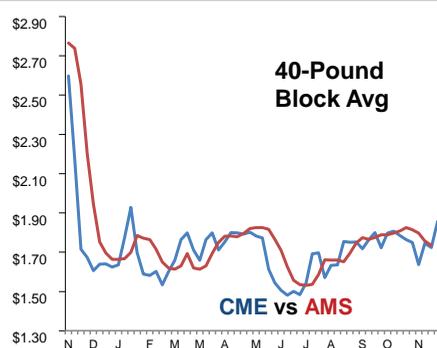
SETTLING PRICE

*Cash Settled

Date	Month	Class III	Class IV	Dry Whey	NDM	Block Cheese	Cheese*	Butter*
11-19	Nov 21	17.97	18.70	58.550	147.550	1.749	1.7470	196.000
11-22	Nov 21	17.95	18.70	58.550	147.850	1.749	1.7470	195.950
11-23	Nov 21	17.94	18.70	58.550	147.850	1.749	1.7470	194.000
11-24	Nov 21	17.95	18.70	58.550	147.850	1.749	1.7460	194.000
11-25	Nov 21	—	—	—	—	—	—	—
11-19	Dec 21	18.57	19.47	63.750	152.750	1.810	1.7740	203.000
11-22	Dec 21	18.42	19.47	64.000	152.500	1.810	1.7670	201.000
11-23	Dec 21	18.33	19.47	64.000	152.500	1.806	1.7500	200.000
11-24	Dec 21	18.32	19.35	64.000	152.000	1.806	1.7480	198.500
11-25	Dec 21	—	—	—	—	—	—	—
11-19	Jan 22	18.98	19.50	66.950	153.000	1.810	1.8050	202.500
11-22	Jan 22	18.99	19.50	66.950	152.700	1.810	1.7970	200.000
11-23	Jan 22	18.75	19.42	66.750	152.500	1.820	1.7750	198.900
11-24	Jan 22	18.64	19.23	67.250	152.225	1.807	1.7620	197.000
11-25	Jan 22	—	—	—	—	—	—	—
11-19	Feb 22	19.10	19.50	66.250	152.750	1.830	1.8070	200.000
11-22	Feb 22	19.11	19.50	66.500	152.725	1.837	1.7970	200.000
11-23	Feb 22	18.98	19.40	65.550	153.000	1.837	1.8100	202.000
11-24	Feb 22	18.95	19.27	66.000	152.500	1.837	1.8040	198.250
11-25	Feb 22	—	—	—	—	—	—	—
11-19	Mar 21	19.16	19.50	65.000	151.725	1.830	1.8390	207.000
11-22	Mar 21	19.06	19.50	65.000	151.650	1.830	1.8230	205.000
11-23	Mar 21	18.95	19.50	65.000	153.000	1.830	1.8200	202.500
11-24	Mar 21	18.90	19.50	65.150	152.250	1.830	1.8140	202.200
11-25	Mar 21	—	—	—	—	—	—	—
11-19	April 21	19.08	19.50	64.000	150.000	1.854	1.8410	209.975
11-22	April 21	18.98	19.50	64.000	149.650	1.854	1.8230	207.400
11-23	April 21	18.90	19.36	64.000	151.750	1.854	1.8250	205.000
11-24	April 21	18.89	19.30	64.000	151.000	1.854	1.8170	202.975
11-25	April 21	—	—	—	—	—	—	—
11-19	May 22	19.12	19.50	62.200	149.750	1.860	1.8360	212.000
11-22	May 22	18.94	19.55	62.250	149.950	1.856	1.8280	210.000
11-23	May 22	18.87	19.39	62.250	150.500	1.856	1.8210	206.000
11-24	May 22	18.82	19.40	62.250	150.000	1.856	1.8210	204.400
11-25	May 22	—	—	—	—	—	—	—
11-19	June 22	19.09	19.50	61.950	149.950	1.880	1.8530	212.000
11-22	June 22	19.03	19.52	61.950	149.000	1.853	1.8280	210.000
11-23	June 22	18.97	19.37	61.950	150.000	1.853	1.8360	207.500
11-24	June 22	18.87	19.40	61.500	149.975	1.853	1.8300	204.950
11-25	June 22	—	—	—	—	—	—	—
11-19	July 22	19.09	19.55	60.075	149.500	1.852	1.8650	209.250
11-22	July 22	19.04	19.55	60.075	149.250	1.852	1.8430	210.000
11-23	July 22	18.92	19.45	60.075	149.500	1.852	1.8460	208.525
11-24	July 22	18.92	19.40	60.075	149.000	1.852	1.8460	206.900
11-25	July 22	—	—	—	—	—	—	—
11-19	Aug 22	19.08	19.43	59.000	149.300	1.859	1.8560	212.000
11-22	Aug 22	19.03	19.54	59.000	148.450	1.859	1.8530	211.000
11-23	Aug 22	18.90	19.47	59.000	148.900	1.859	1.8530	208.525
11-24	Aug 22	18.86	19.47	59.000	149.250	1.859	1.8470	207.700
11-25	Aug 22	—	—	—	—	—	—	—
11-19	Sept 22	19.09	19.45	58.500	148.350	1.862	1.8480	212.000
11-22	Sept 22	18.98	19.45	58.500	147.650	1.862	1.8560	210.000
11-23	Sept 22	18.94	19.43	58.500	148.650	1.862	1.8530	207.250
11-24	Sept 22	18.94	19.30	58.500	148.525	1.862	1.8520	207.500
11-25	Sept 22	—	—	—	—	—	—	—
Interest - Nov. 24		26,549	10,494	3,128	9,383	2,947	21,662	8,167

DAIRY PRODUCT SALES

November 24, 2021—AMS' National Dairy Products Sales Report. Prices included are provided each week by manufacturers. Prices collected are for the (wholesale) point of sale for natural, unaged Cheddar; boxes of butter meeting USDA standards; Extra Grade edible dry whey; and Extra Grade and USPH Grade A nonfortified NFDM. *Revised



Week Ending	Nov. 20	Nov. 13	Nov. 9	Oct. 30
40-Pound Block Cheddar Cheese Prices and Sales				
Weighted Price	Dollars/Pound			
US	1.7338	1.7571	1.7968	1.8148
Sales Volume	Pounds			
US	13,129,258	13,800,781	12,929,292	13,593,237
500-Pound Barrel Cheddar Cheese Prices, Sales & Moisture Content				
Weighted Price	Dollars/Pound			
US	1.7606	1.8278*	1.9408	1.8896
Adjusted to 38% Moisture	Dollars/Pound			
US	1.6805	1.7476*	1.8536	1.8073
Sales Volume	Pounds			
US	14,033,077	13,133,468*	13,801,264	11,351,860
Weighted Moisture Content	Percent			
US	35.04	35.15	35.08	35.18
AA Butter				
Weighted Price	Dollars/Pound			
US	1.9931	1.9496*	1.8754	1.8405
Sales Volume	Pounds			
US	1,951,218	2,007,570*	1,832,408	2,597,341
Extra Grade Dry Whey Prices				
Weighted Price	Dollars/Pounds			
US	0.5865	0.5723*	0.5742	0.5600
Sales Volume	Pounds			
US	5,704,245	5,529,441*	4,649,668	5,383,808
Extra Grade or USPHS Grade A Nonfat Dry Milk				
Average Price	Dollars/Pound			
US	1.4926	1.4865*	1.4374	1.4051
Sales Volume	Pounds			
US	13,614,362	16,584,474*	17,973,387	18,590,966

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DAIRY PRODUCT MARKETS

AS REPORTED BY THE US DEPARTMENT OF AGRICULTURE

WHOLESALE CHEESE MARKETS

NATIONAL - NOV. 19: Staffing shortages continue to be reported regularl. Market tones are uncertain, and contacts say the questions regarding market tones due to freight cost increases, supply chain snags, and employee tightness are far from answered.

NORTHEAST - NOV. 23: Northeastern cheese makers are receiving adequate milk supplies to support strong Cheddar, Mozzarella, and Provolone production. Regional cheese stocks are plentiful, but some contacts believe inventories are in good balance with hearty customer demand. November retail cheese sales are showing quiet growth month to month. As shoppers prepare for at-home holiday feasts and other seasonal get togethers, some grocers continue to heavily promote cheese specials in weekly advertisements. Cheese demand from the food service sector is reportedly somewhat mixed, but the overall trend is steady. Market participants are curious to see where spot prices will go.

Wholesale prices, delivered, dollars per/lb:

Cheddar 40-lb blocks:	\$2.1775 - \$2.4650	Process 5-lb sliced:	\$1.5825 - \$2.0625
Muenster:	\$2.1650 - \$2.5150	Swiss Cuts 10-14 lbs:	\$3.2450 - \$5.5675

MIDWEST AREA - NOV. 23: Cheese plant managers are reporting variant milk availability in their respective areas. Some say they have received no discounted milk load offers ahead of the holiday, while others are reporting spot milk loads from Class to \$2 under Class early in the week. Managers now have to contend with trying to process the extra milk, while also working with limited staff through the holiday weekend. Demand for some retail and foodservice cheese makers has eased somewhat in recent weeks. Contacts are not overly concerned with lighter cheese demand, as it gives already busy cheese makers some time to catch up on back orders. Some contacts opine that cheese market tones are on shaky ground, as the block-over- barrel price gap is atypically large. They contend that producers are inclined to offer loads out at lower prices due to the increasing costs of hauling/transport.

Wholesale prices delivered, dollars per/lb:

Blue 5# Loaf :	\$2.3625 - \$3.4300	Mozzarella 5-6#:	\$1.8925 - \$2.8375
Brick 5# Loaf:	\$2.0925 - \$2.5175	Muenster 5# Loaf:	\$2.0925 - \$2.5175
Cheddar 40# Block:	\$1.8150 - \$2.2150	Process 5# Loaf:	\$1.5675 - \$1.9275
Monterey Jack 10#	\$2.0675 - \$2.2725	Grade A Swiss 6-9#:	\$2.7600 - \$2.8775

WEST - NOV. 23: Demand for cheese across both retail and foodservice markets is strong. Cheese prices are favorable to international purchasers, who are continuing to look to the US to meet current market demand. The ongoing truck driver shortage is causing delays to loads, while export loads are facing further delays due to port congestion. Cheese market prices fluctuated through much of last week. Strong international demand and tight spot availability for blocks have, reportedly, worked to push cheese block prices higher. Cheese inventories are tight, as spot purchasers continue to gobble up loads to meet increased holiday demand. Cheese producers are utilizing available supplies of milk to run busy schedules.

Wholesale prices delivered, dollars per/lb:

Cheddar 10# Cuts:	\$2.0525 - \$2.2525	Process 5# Loaf:	\$1.5850 - \$1.8400
Cheddar 40# Block:	\$1.8050 - \$2.2950	Swiss 6-9# Cuts:	\$3.0525 - \$3.4825

EEX Weekly European Cheese Indices (WECI): Price Per/lb (US Converted)

Variety	Date:	11/24	11/17	Variety	Date:	11/24	11/17
Cheddar Curd		\$2.12	\$2.14	Mild Cheddar		\$2.15	\$2.11
Young Gouda		\$2.07	\$2.06	Mozzarella		\$1.87	\$1.86

FOREIGN -TYPE CHEESE - NOV. 23: Western European cheese availability is very tight for buyers not already contracted. Remaining anticipated 2021 production is sold out. Brokers, rather than manufacturers, are the likely source for any cheese still available for 2021 delivery. Manufacturers are even slowing deliveries to some already contracted customers. While cheese in aging programs has been a standby reserve for months, that's not the case now. Many manufacturers feel that aging stocks have been drawn down about as far as seems prudent to help short term demand. Export customers seeking new commitments are being bumped back. Aging stocks are not likely to be available for export orders.

Selling prices, delivered, dollars per/lb:

	Imported	Domestic
Blue:	\$2.6400 - 5.2300	\$2.1850 - 3.6725
Gorgonzola:	\$3.6900 - 5.7400	\$2.6925 - 3.4100
Parmesan (Italy):	0	\$3.5725 - 5.6625
Romano (Cows Milk):	0	\$3.3750 - 5.5300
Sardo Romano (Argentine):	\$2.8500 - 4.7800	0
Reggianito (Argentine):	\$3.2900 - 4.7800	0
Jarlsberg (Brand):	0	0
Swiss Cuts Switzerland:	0	\$3.2800 - 3.6050
Swiss Cuts Finnish:	\$2.6700- 2.9300	0

NDM PRODUCTS - NOVEMBER 23

NDM - CENTRAL: Prices of all varieties of NDM were unchanged during the shortened trading week. Low/medium heat production is lighter with expected days off at plants, but has been stunted due to employee shortages for months. Steadiness is expected moving into the last weeks of the year, as some plant managers have reported slowly increasing employee numbers. High heat NDM remains in short supply, as production is undoubtedly very limited. NDM market tones are steady.

NDM - WEST: Demand for low/medium heat NDM is steady to lower in both domestic and international markets, as contacts report that purchasers are hesitant to buy at current market prices. Spot purchasers say that inventories are tight, but available to meet current market needs. Deliveries of loads are facing delays in the region due to

a shortage of truck drivers. Labor shortages continue to cause some drying operations in the region to run below capacity. Low/medium heat NDM production is steady. Plant managers are focusing their time on low/medium heat NDM and skim milk powder, limiting production of high heat NDM. Spot inventories of high heat NDM are tight, but in balance with current limited demand.

NDM - EAST: Market tones are somewhat steady with bullish undertones. Domestic and Import demand have not increased sharply, but supplies are notably limited in recent weeks. End users who have been able to interchange NDM and WPC 34% are facing growing challenges, because WPC 34% prices are now beginning to gain ground on nonfat dry milk prices. High heat NDM availability in the East is reportedly very tight.

NATIONAL - CONVENTIONAL DAIRY PRODUCTS

With Thanksgiving Thursday, limiting data availability, total conventional dairy ads posted a 17 percent decline, and total organic dairy ads declined 32 percent. The most advertised dairy item this week is 48- to 64-ounce conventional ice cream, followed by 16-ounce conventional butter and 8-ounce conventional shredded cheese. Yogurt ad numbers collapsed in both the conventional and organic sectors, 39 percent, and 69 percent, respectively.

The advertised price for 8-ounce conventional cheese blocks averaged \$2.46, up 7 cents from last week, while advertised prices for 8-ounce conventional cheese shreds averaged \$2.27, down 12 cents. There were no ads for organic 8-ounce cheese shreds or organic 8-ounce cheese blocks.

The national average advertised price for conventional milk half-gallons is \$1.76, compared to \$4.57 for organic milk half-gallons, providing an organic price premium of \$2.81. The premium increased 18 cents over last week. Organic half-gallon milk is the most advertised organic item, even though ads decreased 26 percent over last week.

RETAIL PRICES - CONVENTIONAL DAIRY - NOVEMBER 24

Commodity	US	NE	SE	MID	SC	SW	NW
Butter 1#	2.99	2.96	2.66	2.75	2.98	3.34	3.76
Cheese 8 oz block	2.46	2.23	2.53	2.39	2.86	3.17	2.22
Cheese 1# block	4.49	4.34	3.99	3.50	NA	5.24	3.68
Cheese 2# block	8.50	NA	NA	6.99	NA	8.66	NA
Cheese 8 oz shred	2.27	2.21	2.19	2.21	2.60	2.56	2.17
Cheese 1# shred	4.23	4.28	3.99	3.50	NA	4.22	4.42
Cottage Cheese	1.86	2.56	1.98	1.60	NA	1.51	1.28
Cream Cheese	1.58	1.54	1.39	1.66	1.28	1.59	1.91
Egg Nog quart	3.31	3.14	3.00	3.77	NA	NA	NA
Egg Nog ½ gallon	4.33	5.11	3.49	3.66	NA	3.78	3.88
Ice Cream 48-64 oz	2.98	2.97	3.12	2.78	3.50	2.86	3.28
Milk ½ gallon	1.76	1.86	NA	NA	NA	1.53	1.86
Milk gallon	3.38	3.51	NA	NA	3.09	3.04	3.64
Sour Cream 16 oz	1.89	1.90	1.90	1.78	1.98	1.98	2.00
Yogurt (Greek) 4-6 oz	1.02	.99	1.04	.86	.99	1.15	.99
Yogurt (Greek) 32 oz	4.59	4.86	4.99	NA	NA	4.21	4.99
Yogurt 4-6 oz	.53	.55	.50	.53	NA	NA	NA
Yogurt 32 oz	2.75	3.21	NA	NA	2.50	2.32	1.99

US: National **Northeast (NE):** CT, DE, MA, MD, ME, NH, NJ, NY, PA, RI, VT; **Southeast (SE):** AL, FL, GA, MD, NC, SC, TN, VA, WV; **Midwest (MID):** IA, IL, IN, KY, MI, MN, ND, NE, OH, SD, WI; **South Central (SC):** AK, CO, KS, LA, MO, NM, OK, TX; **Southwest (SW):** AZ, CA, NV, UT; **Northwest (NW):** ID, MT, OR, WA, WY

ORGANIC DAIRY - RETAIL OVERVIEW

National Weighted Retail Avg Price:	Yogurt 32 oz:	\$3.97
Butter 1 lb:	Greek Yogurt 32 oz:	\$3.99
Cheese 8 oz shred:	UHT Milk 8 oz:	NA
Cheese 8 oz block:	Milk ½ gallon:	\$4.57
Cream Cheese 8 oz:	Milk gallon:	\$6.36
Cottage Cheese 16 oz:	Sour Cream 16 oz:	\$2.49
Yogurt 4-6 oz:	Ice Cream 48-64 oz:	\$5.99

WHOLESALE BUTTER MARKETS - NOVEMBER 23

NATIONAL: Supplies of cream are tight in the East and Central region, while mixed across the West. Labor shortages as well as a shipping delays are causing some butter production plants in the West to run below capacity. Labor issues are also limiting some plants' ability to micro-fix. Still, plants in the East are reportedly micro-fixing to finalize orders in time for Thanksgiving holiday. Butter demand is strong, seasonally, across all regions. Spot inventories are tight in the West, while remaining available to meet current demand in the East.

WEST: Cream availability is mixed, though contacts say enough is available to meet current production needs. Demand for cream is strong throughout the region, though some loads are reportedly facing delays due to a shortage of truck drivers. Retail demand for butter is trending upwards as purchasers continue to buy in preparation for upcoming holidays. Foodservice demand is steady. Contacts report strong purchasing for butter for export to international markets. Spot butter availability is tight; contacts note that inventories of unsalted butter are currently tighter than salted. Delayed deliveries of production supplies and labor shortages are causing some butter makers to run below capacity.

CENTRAL: Butter plant managers are securing cream at holiday level prices early in the week. There were some questions as to whether cream would be available, but contacts say some butter plants will be near capacity heading into the holiday weekend. Therefore, churns may be busier than expected into next week. Demand tones are steadily hearty and butter contacts expect that to remain at least into mid December, if not further. Bulk butter has been notably tighter, and butter market tones have had a recent rejuvenation as they find their way back to the \$2 range.

NORTHEAST: While cream supplies improved at some butter producing plants this week, not all manufacturing plants are looking to increase butter output just yet. As such, churning is mostly steady as some manufacturers favor selling their in-house cream in a pricey cream market. Meanwhile, Northeast butter makers saw the October average producer butterfat test yield a record high 4 percent butterfat for the month. Foodservice and retail markets report butter sales are active on good seasonal demand. The overall undertone of the spot market is firm, with occasional price fluctuations.

WEEKLY COLD STORAGE HOLDINGS

SELECTED STORAGE CENTERS IN 1,000 POUNDS - INCLUDING GOVERNMENT

DATE	BUTTER	CHEESE
11/22/21	35,628	74,185
11/01/21	48,906	83,293
Change	-13,278	-9,108
Percent Change	-27	-11

CME CASH PRICES - NOVEMBER 22 - 26, 2021

Visit www.cheesereporter.com for daily prices

	500-LB CHEDDAR	40-LB CHEDDAR	AA BUTTER	GRADE A NFDM	DRY WHEY
MONDAY November 22	\$1.5100 (-1)	\$1.8575 (NC)	\$1.9900 (-5¼)	\$1.5675 (+1¼)	\$0.7000 (NC)
TUESDAY November 23	\$1.5250 (+1½)	\$1.8575 (NC)	\$1.9900 (NC)	\$1.5675 (NC)	\$0.7000 (NC)
WEDNESDAY November 24	\$1.5250 (NC)	\$1.8575 (NC)	\$1.9900 (NC)	\$1.5625 (-½)	\$0.7000 (NC)
THURSDAY November 25	No Trading	No Trading	No Trading	No Trading	No Trading
FRIDAY November 26	No Trading	No Trading	No Trading	No Trading	No Trading
Week's AVG \$ Change	\$1.5200 (+0.0405)	\$1.8575 (+0.1340)	\$1.9900 (+0.0110)	\$1.56583 (+0.02483)	\$0.7000 (+0.0080)
Last Week's AVG	\$1.4795	\$1.7235	\$1.9890	\$1.5410	\$0.6920
2020 AVG Same Week	\$1.4075	\$1.67333	\$1.32917	\$1.08833	\$0.4325

MARKET OPINION - CHEESE REPORTER

Cheese Comment: There was no block market activity at all on Monday or Tuesday. The barrel price declined Monday on an uncovered offer at \$1.5100, increased Tuesday on an unfilled bid at \$1.5250.

Butter Comment: The price dropped Monday on a sale at \$1.9900. A total of 3 carloads of butter were traded this holiday-shortened week.

WHEY MARKETS - NOVEMBER 22 - 26, 2021

RELEASE DATE - NOVEMBER 23, 2021

Animal Feed Whey—Central: Milk Replacer: .4600 (NC) – .5100 (NC)

Buttermilk Powder:

Central & East: 1.3500 (NC) – 1.4275 (+¼) West: 1.3200 (NC) – 1.4200 (+1½)
Mostly: 1.3400 (NC) – 1.3700 (NC)

Casein: Rennet: 4.7200 (NC) – 4.9300 (NC) Acid: 4.9000 (NC) – 5.6700 (NC)

Dry Whey—Central (Edible):

Nonhygroscopic: .5000 (NC) – .6900 (NC) Mostly: .6200 (NC) – .6650 (+4½)

Dry Whey—West (Edible):

Nonhygroscopic: .5725 (+1½) – .6850 (+2½) Mostly: .5950 (+2½) – .6500 (NC)

Dry Whey—NorthEast: .5800 (+1) – .6800 (NC)

Lactose—Central and West:

Edible: .3300 (NC) – .5300 (-2) Mostly: .3600 (NC) – .4650 (NC)

Nonfat Dry Milk —Central & East:

Low/Medium Heat: 1.5100 (NC) – 1.6200 (NC) Mostly: 1.5250 (NC) – 1.5500 (NC)
High Heat: 1.6500 (NC) – 1.8000 (NC)

Nonfat Dry Milk —Western:

Low/Medium Heat: 1.4900 (-2) – 1.6000 (NC) Mostly: 1.5400 (NC) – 1.5800 (NC)
High Heat: 1.6325 (-2) – 1.7400 (NC)

Whey Protein Concentrate—Central and West:

Edible 34% Protein: 1.1500 (NC) – 1.3925 (+1¼) Mostly: 1.2200 (+4) – 1.2925 (+3¼)

Whole Milk—National: 1.8000 (NC) – 1.9400 (NC)

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Exports Raised

(Continued from p. 1)

Overall US agricultural exports in fiscal year 2022 are projected at \$175.5 billion, down \$2.0 billion from the August forecast, but still a record if realized. Fiscal 2021 agricultural exports reached a record \$172.2 billion, up 23.3 percent, or \$32.5 billion, from fiscal 2020.

US agricultural imports in fiscal 2022 are forecast at \$165.0 billion, up \$5.5 billion from the August forecast. Fiscal 2021 agricultural imports reached a record \$163.3 billion, up 13.9 percent, or \$19.9 billion, from fiscal 2020.

The US agricultural trade balance is forecast to be \$10.5 billion in fiscal 2022, down from the August forecast of \$18.0 billion but up from the fiscal 2021 trade balance of \$8.9 billion. The US ran ag trade deficits of \$1.3 billion in fiscal 2019 and \$3.7 billion in fiscal 2020.

The global economic recovery continues to make progress, but with continued disruptions posed by both price pressures and supply issues, USDA noted. Continued supply-chain backlogs and coronavirus variants have slowed the economic recovery.

Despite these continued challenges, global employment statistics continue to gain strength, pointing to momentum in the economic recovery through the end

of the calendar year, USDA said. World real gross domestic product (GDP) is projected to increase by 5.9 percent in 2021, and then rise by 4.9 percent in 2022.

China's 2021 real GDP is expected to grow by 8.0 percent. Real estate debt concerns and manufacturing setbacks have lowered 2022 growth expectations to 5.6 percent. Continued bottlenecks in supply chains and high energy prices have continued to raise costs.

Japan's real GDP growth for 2022 is revised upwards to 3.2 percent, from 2.8 percent previously. South Korea's real GDP growth in 2022 is revised upwards to 3.3 percent, from 2.9 percent.

Various commodities markets are still experiencing upward pricing pressure due to low inventories, USDA reported. Crude oil prices continue to exceed pre-pandemic levels, and there is some concern about supply keeping pace to match the resurgent demand following a pandemic year when global demand was largely suppressed.

A later response of the Federal Reserve to raise interest rates relative to other central banks and higher prices of crude oil, among other factors, are anticipated to cause the US agricultural-exports weighted dollar to depreciate on average by 3.3 percent in 2021, USDA said.

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