10 Questions Farmers Frequently Ask the U.S. Dairy Export Council



2021





10 FAQs

Renae De Jager and her husband, shown at right, have an active interest in U.S. dairy exports and the potential for growth. Their dairy is located in California's San Joaquin Valley. (Photo: USDEC)

A generation ago, dairy exports were an afterthought. The modest volume of milk that left this country did so mostly through government assistance programs.

Much has changed since then. U.S. dairy has gone global. Today, the milk from one out of six tankers leaving American dairy farms is sold commercially around the world in a broad spectrum of dairy products and ingredients. Put another way, in an average week, more than a day of U.S. milk production gets exported.

A mutually beneficial dynamic has emerged: The world needs U.S. Dairy, and U.S. Dairy needs the world.

The world's need for dairy will escalate as regions with booming populations and growing economies consume

more cheese, butter, whey protein and other dairy products and ingredients, all derived from milk.

Many countries can't meet the growing demand. They lack the required cows, weather, land, water, technology, processing plants and safety measures. They must import and they have the buying power to do so.

The United States is poised to meet the growing global demand. We have the cows and the capacity. That is good news for U.S. dairy farmers.

At the U.S. Dairy Export Council, farmers are our primary funders through the dairy checkoff and our parent organization, Dairy Management Inc. Some farmers have questions. This document addresses 10 of the most frequently asked of USDEC.

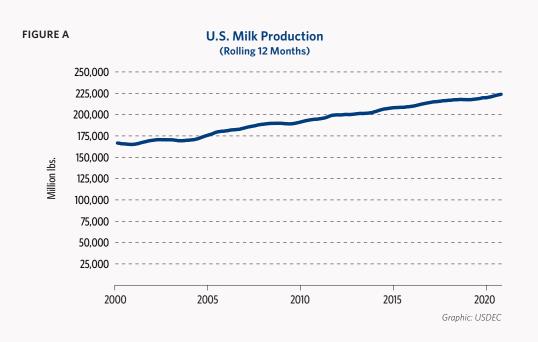
1. Why are exports essential for U.S. dairy farmers?

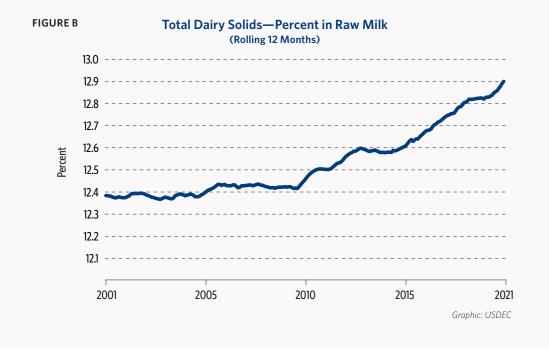
One of the top questions the U.S. Dairy Export Council (USDEC) hears whenever we talk with milk producers is: What value do exports hold for U.S. dairy farmers? U.S. dairy export value may have grown by 9% to \$6.6 billion in 2020, but what's the benefit for farmers?

Exports are so important to the U.S. dairy supply chain—from farmers through processors through traders—that we thought it an appropriate topic for National Dairy Month.

What follows is the answer to that No. 1 question: Why are exports essential for U.S. dairy farmers?

Cover photo: Dairy Management Inc.





Essential for balance

U.S. dairy farmers are the best at what they do. To confirm that, you just have to see the growth in U.S. milk production over the last decades with U.S. milk production growing by 15%, or 1.4% per year on average, since 2000. (See Figure A)

That increase has been so steady in part because every single year milk production per cow has risen, as farmers have adopted innovative practices in technology, nutrition, genetics and animal care. Indeed, rising productivity isn't even limited to just more liquid milk per cow. Each hundredweight of milk contains more milkfat, protein and lactose – or milk solids that are used to create the products consumers around the world enjoy. (See Figure B)

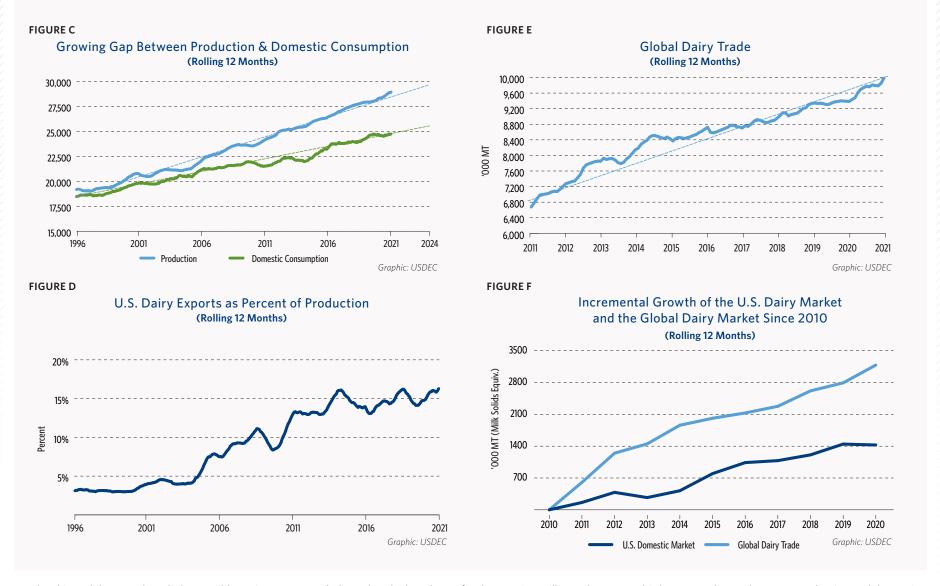
Partially because of those productivity gains, U.S. milk production has been expanding at a faster rate than domestic demand, as you can see on the chart on the next page. This is creating a growing surplus of milk that needs to find a home. (See Figure C)

The good news is that exports have filled the gap, ensuring market balance by accounting for over 16 percent of total milk solids production in 2020. (See Figure D)

This is a story we've told before. But we want to highlight one additional nuance regarding components.

Today, the U.S. is relatively balanced in milkfat, as domestic consumption of milkfat is roughly 97% that of production. Essentially, nearly all the milkfat produced in the U.S. stays in the U.S. That is not the case with skim stream. Domestic consumption of skim solids only accounts for 80% of production.

Put another way, the U.S. cannot be fully balanced in both milkfat and skim solids without either 1) exporting more skim or 2) reducing milk production by 20% to balance



out the skim solids, even though that would require importing 20% of total milkfat consumption in the U.S. Essentially, as cows aren't going to start producing pure cream, we have protein and lactose and other skim solids that need a home.

Essential for growth

As relevant as that argument is, the case for exports is more than just establishing market balance. We at ${\sf USDEC}$

believe that the best home for the growing milk supply in the United States is the international market – not because we have milk powder, whey and cheese to sell but because customers around the world are demanding more dairy products every year.

As clearly shown above, many U.S. dairy farmers of all sizes have demonstrated a desire to grow their dairy operations – either through more cows, efficiency gains or often both. In the prior section, we mentioned how

this has created a gap between production and domestic consumption today. But as we look towards tomorrow, the international market will become increasingly important for enabling U.S. dairy farmers of all sizes and regions to continue growing.

Simply put, the international market is growing faster than the U.S. domestic market.

Over the past 10 years, global dairy trade grew on average by 3.8% per year on a milk solids equivalent

basis. That increase is the equivalent of more than 7 billion pounds of dairy solids or 54 billion pounds of liquid milk! Even a global pandemic failed to slow down international consumers' appetite for dairy with global dairy trade expanding by 3.9% in 2020, adjusting for leap day. (See Figure E)

While we are not ignoring the U.S. domestic market and its importance, exports are increasingly becoming the main driver of growth. Since 2003, over half of all additional milk produced by U.S. farmers has gone to exports. And that figure is growing – an astonishing 75% of the "new milk" produced in 2020 went overseas. Essentially, the international market is crucial to enabling U.S. milk production growth.

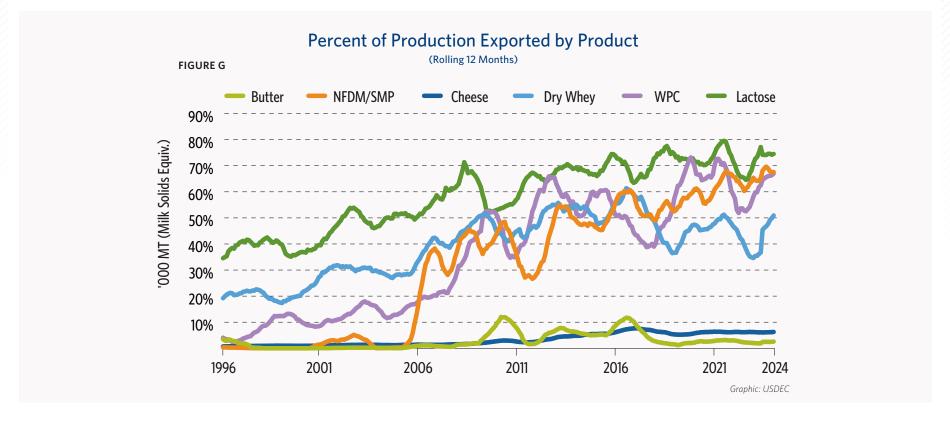
But even that impressive fact may undersell the opportunity of the international market. If you look at the chart below where we compare the incremental growth of the U.S. domestic consumption in red and the incremental growth of all the dairy traded internationally in blue, you can see that global dairy markets present a greater opportunity for U.S. dairy to grow. (See Figure F)

Looking ahead, we expect global dairy demand to continue its long-term expansion thanks to 96 percent of the world's population living outside of the U.S. and that global population experiencing rising incomes and a growing appetite for dairy. Seizing the opportunity to increase share in the expanding international market will enable U.S. dairy farmers to grow at a faster pace than if the U.S. relied solely on the domestic market.

Essential for farmers' milk checks

Finally, exports are essential for dairy farmers across the country, regardless of region or size, because exports support all farmers' milk checks.

Fundamentally, in the Federal Milk Marketing Order system, the milk check is determined by the prices of four products: cheddar cheese, butter, nonfat dry milk (NFDM) and dry whey. Cheddar cheese and dry whey drive Class III prices, and butter and NFDM determine Class IV prices. Those prices also feed into Classes I and II. So, even if a farmer operates in a part of the country where the vast majority of the milk is Class I for fluid milk for domestic consumption, exports are still crucial to that milk check.





More than 95% of U.S. dairy farms are family-owned. (Photo: Dairy Management Inc.)

This is because the U.S. exports most of the NFDM and whey we produce. In 2020, we shipped 70% of U.S. NFDM and half of U.S. dry whey overseas. Without international customers, there would be far more milk powder and dry whey in the U.S. market, which would then significantly weigh down U.S. farmgate prices, whether a farmer is in California or Georgia.

Indeed, even when we export the products that don't feed directly into the formula, it still supports the milk check. Last year, we exported about 70% of the lactose produced in the U.S. and 65% of the whey protein concentrate. If we do not have such export options, we would have much more sweet whey on our hands, which would push down Class III prices. (See Figure G)

Beyond ingredients, the United States also shipped 6% of the U.S. cheese supply overseas. While that might seem like a small percentage, it still makes the U.S. the largest single-country cheese exporter in the world. Additionally, with new cheese capacity online this year and more planned for the years ahead combined with more milk being produced, the international market will only become more important to cheese prices (and thus farmer's milk checks) as an increasing percentage of cheese goes overseas.

Wrapping up, as we can see, exports are essential to the U.S. dairy farmer today and will become more so in the

coming years. At the most fundamental level, exports are essential for the U.S. dairy farmer to 1) ensure market balance; 2) enable dairy farmers to grow; and 3) support the milk check.

However, in order for the U.S. to maintain and grow dairy exports over the coming decades, the U.S. must have adequate regulatory and tariff access to these overseas markets, insights into the threats and opportunities for U.S. dairy, and targeted marketing and communications highlighting of the benefits of U.S. dairy exports to global customers. For that, USDEC will continue to support our farmers, manufacturers and exports since the end goal is the same – to keep the U.S. industry healthy.

2. What does the U.S. Dairy Export Council do?

Let us first make it clear what we do not do. USDEC does not and cannot export dairy products. As a nonprofit, independent membership organization we can and do represent the global trade interests of the entire U.S. dairy industry. We are dairy's experts on exports. Our main website is usdec.org.

Primarily funded by farmers through the dairy checkoff, USDEC's mission is to promote dairy exports, enriching the well-being of people, communities and the planet.

Dairy Management Inc., based in Rosemont, Illinois, founded USDEC, which has its headquarters in Arlington, Virginia. With extensive expertise in trade policy, market access, regulatory affairs, dairy ingredients and cheese, the USDEC staff works to help farmers and USDEC members by increasing dairy export volume and value.

USDEC has eight offices in key global market with "boots on the ground" providing eyes, ears, relationships and insights no one else has.

What does USDEC do for its farmer-funder, members and the entire dairy industry? Among other things:

- Engage with food and beverage manufacturers, retailers, consumers, and food and dairy organizations worldwide.
- Tell the story of U.S. dairy, about nutritious, highquality products, cutting-edge technology, innovation, commitment to serving world markets, supply consistency and world-leading sustainability.
- Connect our members with buyers and help them navigate the rules and regulations required to access high-potential markets.
- Work with the U.S. government to advance trade policy that facilitates dairy trade.



3. How did the U.S. Dairy Export Council start?

The North American Free Trade Agreement (NAFTA) in 1994 opened up trade to Mexico and Canada, while the finalization of the Uruguay Round of the General Agreement on Tariffs and Trade and establishment of the World Trade Organization in that same year spoke to even broader potential on a global basis. The U.S. dairy industry saw and seized an opportunity.

The vision: If U.S. milk producers, dairy processors and others in the industry could work hand-in-hand to increase the value and volume of U.S. dairy exports, all boats would rise.

That led to the creation of the U.S. Dairy Export Council in 1995. Under the governance of Dairy Management Inc., with funding from the dairy checkoff and guidance from its member companies, USDEC has cleared new paths to markets.

USDEC was and still is the only dairy organization that brings together milk producers, dairy processors, co-ops, ingredient suppliers and export traders under one roof.

4. How is the U.S. Dairy Export Council funded?

The national dairy checkoff funds most of USDEC's budget through Dairy Management Inc., USDEC's parent organization.

Acknowledging the industry's need to increase exports, state and regional checkoff organizations have stepped up to make additional contributions. This money helped USDEC forge new global partnerships, hire additional people in key markets and expand our programs to facilitate U.S. export growth.

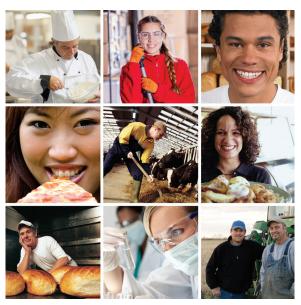
USDEC is supported by U.S. Department of Agriculture's programs for generic overseas marketing and promotional activities designed to build commercial export markets for U.S. agricultural products and commodities.

USDEC relies on membership dues to fund its trade policy advocacy.

5. Why should friends and neighbors not in the U.S. dairy industry care about exports?

There are many answers to this question. Let's focus on one: their pocketbooks. If they care about the U.S. economy, the jobs it creates and the state and federal taxes they pay, they have a stake in U.S. dairy exports.

Directly and indirectly, U.S. dairy exports support nearly 100,000 American jobs. For every dollar of dairy products exported to our historically largest market, Mexico, \$2.50 of economic impact returns to the U.S. economy, providing more than double the bang for the buck.



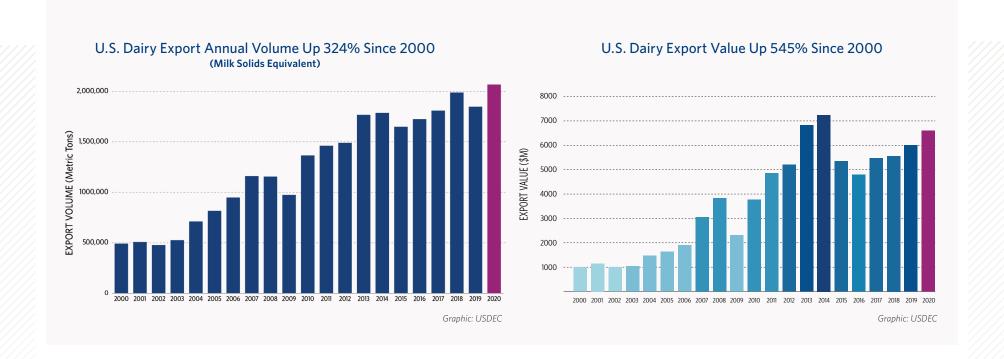
Dairy's "ripple effect" reaches across a vast portion of the U.S. (and global) economy. (Photo montage: USDEC)

But the real impact is much larger when you consider exports are a necessary pillar of a U.S. dairy industry that is a jobs machine, generating employment, tax revenue and other economic impacts coast-to-coast.

Factor in the dairy industry's "ripple effect" to connected economic sectors (such as manufacturing and retail) and you see eye-popping numbers. A recently updated economic impact report from the International Dairy Foods Association shows the U.S. dairy industry's ripple effect:

- Supports 3.3 million jobs.
- Generates more than \$41.6 billion in direct wages.
- Has an overall economic impact of nearly \$753 billion.

In short, dairy exports are a vital part of a U.S. dairy industry that fuels the entire U.S. economy, especially in rural communities.



6. How have dairy exports performed with USDEC?

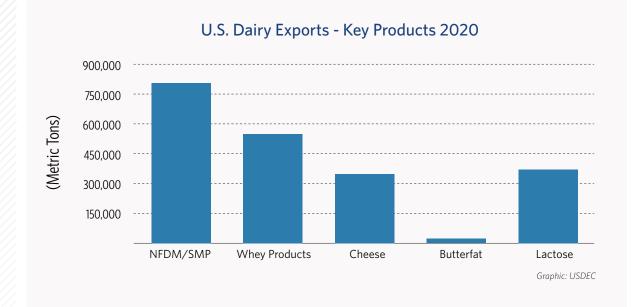
Since 2000, the volume of U.S. dairy exports (on a milk solids basis) has increased by 324%.

Annual sales of exports, measured in dollars, have increased by 545%.

Last year, exports set records. Despite the pandemic, shipping issues and price volatility in the cheese market, U.S. dairy exports in 2020 achieved:

- A record in milk solids equivalent (MSE) volume of 2.1 million metric tons (MT).
- The highest year of value since 2014 (\$6.6 billion).
- A 36% increase in value since 2016.





U.S. DAIRY EXPORTS, TOP 10 MARKETS		
2020, million \$		
	2020	vs. prior year
Mexico	\$1,405	-8%
Southeast Asia	1,264	+36%
Canada	824	+2%
China	540	+44%
South America	385	+5%
South Korea	373	+12%
MENA	328	+20%
Japan	323	+14%
Caribbean	218	-7%
Central America	209	NC

Source: U.S. Dairy Export Council, U.S. Bureau of Census

7. What U.S. dairy products get exported and where are they shipped?

Nonfat dry milk/skim milk powder (NFDM/SMP), whey products, cheese and lactose make up the bulk of products exported by the United States.

In 2020, U.S. NFDM/SMP exports grew 16%, topping 800,000 metric tons for the first time, and China's renewed whey demand (part of its efforts to rebuild a pig herd decimated by African Swine Fever in 2019) helped drive whey product sales up 24%.

USDEC categorizes the places where we export as "markets." A market can be a country or a region.

Mexico and Southeast Asia have been the two top U.S. export markets in recent years.

The price of U.S. dairy exports to Southeast Asia grew 36% in 2020, fueled by strong demand for NFDM/SMP. The Phase 1 U.S.-China trade agreement and robust whey demand helped lift Chinese import value by 44%.

Other markets showing significant growth in 2020 were the Middle East/North Africa, Japan, South Korea and South America.

Historically, Mexico has been our No. 1 market. When the one-two punch of recession and pandemic curtailed Mexico's dairy importing capacity last year, it could have been a difficult year if U.S. dairy exporters were dependent on a single market.

Thanks in part to USDEC's global market development, a diversified U.S. export portfolio mitigated risks, with the gains in Southeast Asia more than overcoming the losses in Mexico.

8. What is fueling the dairy boom in Southeast Asia?

Southeast Asia provides a ripe opportunity for U.S. dairy exporters with its exploding population of young people and growing middle class.

The region, which encompasses the six major markets of export focus of Indonesia, Malaysia, the Philippines, Singapore, Thailand and Vietnam, and includes Brunei Darussalam, Myanmar, Timor-Leste, Cambodia and Laos, has a combined population of more than 675 million people, more than double the population of the United States.

In 2020, Southeast Asia was the United States' No. 1 global customer on a volume basis and No. 2 on a value (or dollar sales) basis. From 2019 to 2020, sales to Southeast Asia rose 36%, to \$1.26 billion.

Southeast Asia's emergence as the largest destination for U.S. dairy exports has been primarily driven by U.S. skim milk powder shipments to Indonesia, Malaysia, the Philippines, Singapore, Thailand and Vietnam.

The equivalent of about one day's production of U.S. milk per month goes to Southeast Asia.

Even more exciting for the future, USDEC has positioned the U.S. dairy industry to take advantage of opportunities in Southeast Asia through the new U.S. Center for Dairy Excellence in Singapore.

9. Why did USDEC build a dairy center in Southeast Asia?

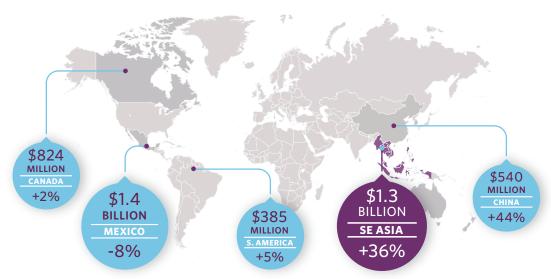
USDEC's new U.S. Center for Dairy Excellence, which was introduced in October 2020, will help satisfy Southeast Asia's growing need for U.S. dairy products and ingredients.

The state-of-the-art facility is an education hub and collaborative meeting place aimed at inspiring innovation utilizing U.S. dairy ingredients and cheeses. Visitors to the center will learn how U.S. dairy farmers and processors bring the highest quality products and ingredients from the farm to consumers in the most sustainable and efficient way.

The U.S. Center for Dairy Excellence is an ambitious effort to build a gateway between U.S. suppliers and customers in Southeast Asia. It gives the collective U.S. dairy industry—for the first time—a shared physical presence in a key growth market outside the United States.

The investment is a tangible illustration of increasing optimism for a more prosperous U.S. dairy future in a fast-growing region.

Exports to Southeast Asia are Booming



Graphic: USDEC, comparing 2020 to 2019 exports.



The new U.S. Center for Dairy Excellence in Singapore will allow USDEC food scientists to create foods using U.S. dairy ingredients to meet the taste preferences of Southeast Asian customers. (Photo: USDEC)

USDEC has invested resources throughout Asia, where dairy consumption is increasing. (Photos: USDEC, 123rf)





Sustainability is a high priority for U.S. dairy industry. The U.S. Center for Dairy Excellence in Singapore provides a platform to communicate U.S. sustainability and other messages to food and beverage customers and their consumers in Southeast Asia.

10. Will U.S. dairy exports continue to rise in the future?

No one can predict the future. Markets go up. Markets go down. That is the nature of markets.

But any assessment of the opportunity for the U.S. in the global dairy market must begin with the basic fact that more than 95% of our potential customers live outside the United States. Exports are a world of opportunity.

Our long-term projections indicate Asia, Latin America and the Middle East/North Africa are key markets positioned for more dairy growth.

The dairy demand growth scenario in those places is textbook: Economic expansion, rising incomes, population gains, infrastructure upgrades, urbanization, retail and foodservice modernization and a shift to higher protein diets, including milk products. Domestic milk production and dairy processing capacity fall short of needs.

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アメリカ産チーズ アイディアメニューコンテスト 主催 アメリカ乳製品輸出協会 ** とが顕達2・エテースプロフェックロスを設定・アメリカ及を改和しませれ 2018/11/23

Think USA Dairy



California's Ray Prock appreciates how U.S. dairy exports enhance the economic bottom line of dairy farmers. (Photo: Dairy Management Inc.)

The potential for growth is even greater as U.S. processors, with help from USDEC, expand their portfolio of products, continue to adapt products to specific markets and build long-term relationships around the world.

The United States has a long-range competitive advantage. We can continue growing our milk supply as major competitors like New Zealand face potential cutbacks from alternative land uses on an already limited land base.

The potential for growth is even greater as U.S. processors, with help from USDEC, expand their portfolio of products, continue to adapt products to specific markets and build long-term relationships around the world.

Dairy exports can be volatile. But over the long haul, global dairy imports should continue to grow for all the reasons they've always grown, including:

- Increasing populations and incomes in emerging markets.
- Difficulties in dairying in hot or humid climates.
- Rising awareness of the health benefits of dairy.
- Improved cold-chain infrastructure.
- Ongoing innovation in the functionality and application of dairy ingredients.

That's good news for the U.S. Dairy Export Council and good news for the farmers who provide most of our funding through the dairy checkoff.

Need copies of this report? Subscribe to the U.S. Dairy Exporter Blog (*blog.usdec.org/USdairyexporter*) to get online access to the report. You'll also get blog updates keeping you up-to-date on global dairy market analysis, research and news.

Questions: Contact Mark O'Keefe, USDEC's vice president of editorial services, at *mokeefe@usdec.org*.