

Export Profile

POPULATION OVERLOAD?

The world's future food needs mandate expanded trade and a sharper focus on nutrition.

The global population is on track to reach 9.1 billion by 2050, according to the U.N. Food & Agriculture Organization (FAO). That means 2.3 billion more mouths to feed than today. Virtually all those additional mouths will reside in developing nations, primarily in Asia and Africa.

In addition, economic growth and urbanization (by 2050, around 70 percent of the world will live in cities, compared to about half today) will further lift overall food consumption and drive demand for foods higher in protein—dairy and meat, specifically.

In order to feed the additional mouths, as well as accommodate the rising appetites, world food production would need to expand 70 percent from the annual 2005/2007 average, according to the FAO.

The numbers hold positive implications for U.S. dairy exporters: Trade will be a critical component to achieving future global food security. As former executive director of the U.N. World Food Program (WFP) Catherine Bertini noted at the Chicago Council Symposium on Global Agriculture and Food Security this May, "If we are to feed a world of 9 billion people by 2050, more agricultural commodities, more food will need to move across country borders with more efficiency."

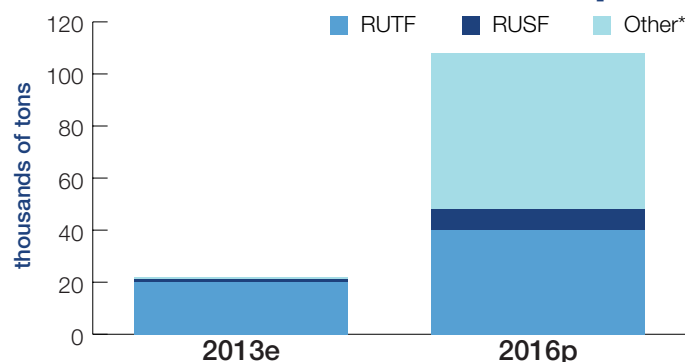
But the projections also emphasize a particular opportunity where dairy's profile is rising sharply: food aid.

According to the WFP, malnutrition is the No. 1 risk to health worldwide. Malnutrition (particularly in the first 1,000 days of life) and stunting have debilitating effects on the physical and mental development of populations. Studies have shown that hunger reduces school attendance, lowers IQ, decreases wages and hinders economic development.

WFP dubbed stunting, which affected more than one-quarter of all children under 5 in 2011, the "new plague" of our century.

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Global Dairy Ingredient Use in Nutrition Products for Vulnerable Groups



* "Other" takes into account all blended products, including "affordable" milk products for pregnant and lactating women
Source: USDEC

Although USDEC projects sizable gains for dairy ingredient use in ready-to-use therapeutic foods (RUTF) and ready-to-use supplementary foods (RUSF), new products containing dairy and targeted at vulnerable groups (categorized as "Other" in the graph) hold even greater potential. USDEC projects this "Other" category will be a 60,000-100,000-ton market on its own by 2016. The graph illustrates the minimum projection.

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The U.S. Dairy Export Council, primarily funded by Dairy Management Inc. through the producer checkoff, works closely with its member processors, trading companies and others to build global demand for U.S. dairy products.

VIEWPOINT



THE BUSINESS CASE FOR TRACEABILITY

By Jeremy Travis, vice president of operations, Hilmar Cheese Co., and member of the Innovation Center for U.S. Dairy's Traceability Subcommittee

The Innovation Center for U.S. Dairy®, a pre-competitive forum for the industry established by America's dairy farmers through the dairy checkoff program, is poised to unveil final voluntary advanced traceability guidelines on Sept. 10. If dairy processors are still worried about the costs and commitment, they needn't be.

Advanced traceability requires no major investments in advanced technology. You can accomplish it with pencil and paper. It does require management and staff commitment, but as Hilmar found when we adopted a food-safety-based quality standard a decade ago and subsequently embraced advanced traceability wholeheartedly, the value delivered more than justifies the effort.

Enhanced traceability improved our recordkeeping, ensured that our process of managing our ins and outs was timely and effective, significantly upgraded our lot and material usage control and helped us better understand exactly what went into each product. Just as the flow of information through the food supply chain improved, so did our internal flow, from sourcing and warehousing through production, qualification of finished products, shipping and delivery.

Furthermore, customers today—particularly those overseas—expect enhanced traceability. Companies that can deliver it gain a competitive edge.

We have the opportunity to create our own rules on traceability. Our voluntary practices can become official public policy via the Food Safety Modernization Act by convincing FDA of their merits. But it requires all dairy processors' participation. Enhanced traceability is about an industry improving customer and consumer confidence together.

There is a short window of opportunity for industry action, so when Sept. 10 comes we need to act. The more buy-in the FDA sees from dairy processors, the more effective all of us will be. ■ ■ ■

To view the draft traceability guidelines, [click here](#).

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It follows then that nutrition security, as opposed to just food security, is now at the core of the food aid agenda.

"Dairy may help address this new plague and prevent new cases of stunting in moderately malnourished children," says Véronique Lagrange, USDEC senior vice president, strategy and insights.

Scientific evidence continues to mount that dairy protein plays a key role in both the treatment and prevention of malnutrition. There is strong evidence that:

- Cow's milk stimulates linear growth in nutritionally vulnerable children.
- Milk stimulates weight gain and linear growth in infancy.
- Whey proteins support lean body mass growth, muscle recovery.
- Dairy proteins have superior nutritional quality (see "Proof Positive" on page 5).
- Other components in milk (lactose, minerals such as phosphorus) are important in re-nutrition.

"But there still is a lot we do not know," says Lagrange. "We need more information so that policymakers can incorporate supplementation with dairy, once and for all, as part of official guidelines."

USDEC is funding, in collaboration with U.S. and international teams, clinical research to identify a defined dose of dairy ingredients that is effective for the treatment of moderate malnutrition and the prevention of stunting.

"We are also working on a global research plan to help accelerate the advancement of science in this sector and support nutrition policies in many emerging countries," says Lagrange. "In turn, this will lead to increased demand in South Asia and Sub-Saharan Africa."

Several dairy ingredients are already used in ready-to-use supplementary foods purchased by UNICEF, Doctors without Borders and, more recently, USAID. Several U.S. suppliers and an international network of small certified entrepreneurs are interested in using U.S. whey proteins, permeate and milk powders.

The "size of the prize" for U.S. ingredients is estimated at a minimum of 60,000 tons but as high as 100,000 tons (SMP equivalent) annually by 2016.

Says Lagrange, "Now is the time to act to optimize the opportunity, and mostly, to help save the future of 195 million children." ■ ■ ■

MARKETUpdate: Indonesia

STRATEGIC STEPPING STONE

By virtue of its population, Indonesia steals the spotlight, but the whole of Southeast Asia remains the larger prize.

U.S. shipments of cheese, ice cream and dairy ingredients to Indonesia for the first six months of 2013 jumped 41 percent to nearly 58,000 tons compared to the first half of 2012. That performance propelled Indonesia from the No. 7 U.S. dairy export destination to No. 4, as January-June sales topped \$162 million. Only powerhouse buyers Mexico, Canada and China purchased more.

Strong underlying fundamentals suggest bigger numbers await, not just on the 240-million-person archipelago but throughout Southeast Asia.

Indonesia is the fourth most populous nation in the world, enjoying the solid economic growth that often follows political stability. Demographics are positive: a large, expanding population, around 60 percent of which is under age 35; a well-educated, growing middle class that has exhibited a willingness to spend; steadily rising use of dairy within the Indonesian diet; and plenty of room for per capita dairy development.

Indonesia ranked at the top of Nielsen's most recent Global Consumer Confidence Survey based on job prospects, personal finances and capacity to spend.

"The major multi-nationals are already in Indonesia. A number have reported over 20 percent annual growth for the last three years, and have yet to see a slowdown," says Dan FitzGerald, USDEC Southeast Asia representative.

Key to the most recent U.S. gains was a marked shift in U.S. suppliers' approach to the market, hastened, ironically, by Indonesia's tightening of import regulations.

"The regulations require Indonesian buyers to apply to import a specified volume of a specified ingredient from a specified plant during a specified time window. Their unintended effect was to change Indonesia from a 'spot market' to one that required forward sales planning," says FitzGerald. "U.S. dairy exports stepped up to capture the vacuum that was the previous 'spot market.'"

And as Indonesia replaced the Philippines as the largest dairy market in Southeast Asia, it became increasingly attractive to U.S. dairy exporters.



More than 10 million people reside in Jakarta, the capital of Indonesia.

"U.S. suppliers are doing well. However, it is critical to keep in mind that Indonesia is only one country in the Association of Southeast Asian Nations (ASEAN)," says FitzGerald.

In that same Nielsen Global Consumer Confidence Survey, the Philippines and Thailand ranked three and four, respectively, and Malaysia and Vietnam were coming on strong.

"We expect dairy consumption across ASEAN-6 to grow 2.4 percent per year through 2020. This creates a requirement for an extra [3 million tons] of milk, which local players are ill-equipped to deliver," Rabobank Analyst Michael Harvey noted in a recent report on Southeast Asia.

Foreign dairy suppliers, including Nestlé, Japan's Megmilk Snow Brand and New Zealand's Fonterra Cooperative Group, have all expanded or are in the process of expanding Indonesian operations. While these companies see promise in Indonesia, they have their eyes on the broader prize, says FitzGerald.

When the 10-nation ASEAN Economic Community is realized in 2015, ASEAN becomes a tariff-free market within the region.

"They haven't chosen Indonesia merely for its domestic market but as a regional hub. They will be able to export raw materials (dairy ingredients and commodity cheese) to their ASEAN base in Indonesia, then process for retail and foodservice sales for tariff-free re-export within the 10 countries," says FitzGerald. "U.S. companies need to think on that same level. They need an ASEAN strategy, not separate Indonesia or Philippine strategies." ■ ■ ■

Q&A: FOOD SECURITY

WITH CATHERINE BERTINI



Q: In your presentation in May at the Chicago Council Symposium on Global Agriculture and Food Security, you mentioned that trade helps further the cause of global food security. How so?

CB: The bottom line is that trade opens markets. Production in any country—milk production, fine clothing production or anything else—helps strengthen economies worldwide, as long as those goods can be sold across borders.

Q: What needs to be done to reinvigorate trade as a food security and development tool?

CB: Various issues in U.S. trade policy need to be addressed . . . For instance, monetization of food aid should be eliminated, as the administration proposed. A variety of trade restrictions should be removed. A friend of mine is a farmer in Africa. He said he was expanding his farm. I asked him what he would be growing. Coffee? Bananas? Sugar? I went through a list of things. He said, “No. Palm oil. I’m going to grow something you—the West—will allow me to sell to you.”

Presumably, he is competitive in his country selling [bio-diverse] crops. But if he wants to grow his farm, then he has to think about exports. If a farmer is restricted to just what he or she can sell in his/her own country, that is a big limitation to growth and opportunity.

Q: One of the prerequisites for improving global food security is improving knowledge transfer between farmers, researchers and end users. Can you give an example of how knowledge transfer currently falls short?

CB: As scientists continue developing different kind of seeds, no matter what the crop, those seeds have to pass at least two critical tests: 1) what will the ultimate food produced taste like, and 2) how much more or less water, firewood and time is it going to take to prepare. Funders might spend money developing a great seed that does everything they want it to do—being disease resistant, drought resistant and so on—but if the improved seed doesn’t produce food to entice the palate of the people eating it, it may not be accepted. And if a new product will take more time, water and firewood to cook, then it is also unlikely to succeed.

Those are the kind of results it is absolutely critical for researchers to learn. Their most reliable sources are women—the cooks—but they are seldom in leadership positions, so they must be sought out.

Q: How might a more food-secure world benefit U.S. milk producers and U.S. dairy manufacturers from a business standpoint?

CB: Apart from being the right thing to do, it has a huge potential business benefit because as countries grow stronger economically, they become better trading partners, they become more stable, they become less in need of band-aid foreign intervention . . . Helping countries develop better economically is the best hedge against a host of problems and helps build a stronger world. Every major developed country in



An irrigated farm field in South Africa. As global water supplies tighten, minimizing water use in agriculture is a key to global food security.

the world began as an ag-based economy: the United States, Canada, Australia, the nations of Europe. Each country started as agriculture-based and each country built on that base. That is what can happen in developing countries too. ■ ■ ■

Catherine Bertini is a senior fellow at The Chicago Council on Global Affairs; professor of public administration and international affairs, Maxwell School of Citizenship and Public Affairs at Syracuse University; former executive director of the U.N. World Food Program; and recipient of the 2003 World Food Prize.

MARKET Development

PROOF POSITIVE

More accurate protein quality test cements dairy's advantage over plant-based proteins.

The dairy industry has long claimed that milk proteins are superior to plant-based alternatives like soy. Now, with the recent recommendation from the U.N. Food and Agriculture Organization (FAO) that the food industry use the Digestible Indispensable Amino Acid Score (DIAAS) rather than the Protein Digestibility Corrected Amino Acid Score (PDCAAS) to measure protein quality, dairy has official, incontrovertible proof.

USDEC supported the change and helped introduce the world to DIAAS when it organized the Protein Quality Symposium at last November's International Dairy Federation (IDF) World Dairy Summit in South Africa.

"DIAAS clearly demonstrates the superiority of dairy proteins compared to plant proteins," says Laurence Rycken, IDF nutrition officer.

PDCAAS, in use since 1991, has been widely criticized for a number of reasons, including that it overestimates the amount of amino acids absorbed by the body, thus providing misleading information about the relative value of a number of protein sources. If a protein is not bioavailable, if a body cannot digest and absorb it, then it provides no benefits. Some vegetable proteins are, for example, attached to fiber and the body cannot get at them.

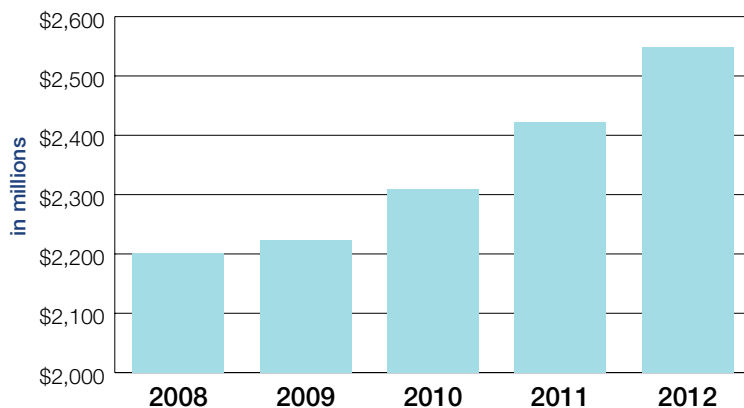
DIAAS quantifies only the bioavailable part—only the nutrients digested from the food. In that light, dairy gains a clear and powerful competitive edge.

"The high level of essential amino acids with high digestibility, such as the high lysine bioavailability in dairy proteins, makes dairy protein a vital food ingredient for managing protein energy malnutrition and supporting growth in young children," says Rycken.

Data in the FAO report showed WMP to have a DIAAS score three times that of wheat protein and 10-30 percent greater than the highest refined soy isolate.

The results are particularly meaningful for food aid products and high-value applications like medical nutrition. In regions where food resources are scarce or for people whose appetites are reduced due to age or illness or for those who have difficulties swallowing due to medical treatment, protein quality becomes extremely important.

Enteral Medical Nutrition Sales
(United States, Canada and Mexico)



Source: USDEC Medical Nutrition report

The enteral medical nutrition market has posted steady gains in recent years despite the slow U.S. economy—a testament to the category's strength and encouraging for expanded high-value dairy protein utilization. "Enteral" refers to nutrition absorbed by the body through the gastrointestinal tract.

"For vulnerable segments of the population, it is crucial to pack all the nutrients they need in a small volume," says David Clark, owner of Bovina Mountain Consulting, former director of R&D for FrieslandCampina and now a USDEC consultant. "Dairy proteins are already widely used in medical nutrition. But in some cases, formulators look toward alternative proteins. Now, it is clear how those alternatives rank vs. dairy."

Medical nutrition was a \$2.5 billion market in North America alone in 2012. It is poised for steady and strong growth, as the world's senior population booms and people seek affordable methods to address conditions like sarcopenia and other diseases associated with aging.

"We will all be living longer and have various treatable ailments that benefit from this type of nutrition," says Clark.

However, before DIAAS is fully implemented, researchers will need to develop additional supportive data, including generating more ileal amino acid digestibility values so that a database can be created to eliminate the need for repeat testing of food sources—a time-consuming and costly endeavor.

The industry should play a role in helping facilitate the research and adoption of DIAAS, learning about it and communicating the benefits, says Clark. "A 30 percent difference with soy is huge." ■ ■ ■

EXPORT Documentation

eDOCS ARRIVES

New online order system cuts red tape, time and errors in obtaining dairy export certificates.

It's been more than two years in the making, but the outcome is well worth the wait.

At the end of June, USDA's Agricultural Marketing Service (AMS) rolled out the Electronic Document Creation System (eDocs), a user-friendly, simplified, expedited method for U.S. dairy suppliers to request European Union (EU) health certification online.



Prior to eDocs, U.S. suppliers looking to export to the EU would either send faxed certificate requests to AMS or utilize the agency's previous online ordering system. Both options were cumbersome.

Compared to AMS's previous online system, eDocs demands fewer hours of input time for the requesting company because users can create up to 60 custom templates as well as reuse data from old certificate requests. Templates and certificates are saved at the company level, allowing for greater efficiency among colleagues.

For companies that still fax requests to AMS, eDocs all but eliminates the potential for transcription errors and significantly reduces certificate turnaround time.

"eDocs substantially raises the speed and accuracy of certificate issuance," says Sandra Benson, USDEC's director of market access and regulatory

affairs. "The increased efficiency gained through eDocs reduces transaction risk, simplifying U.S. dairy trade in a way that builds on itself to encourage even greater volumes."

Although eDocs only recently rolled out, there is an urgency for U.S. suppliers to sign up: At press time, AMS was planning to shut down its previous online order system on Sept. 1, 2013. The agency will continue to accept fax requests, but the fax method will grow increasingly costly in the months ahead, as AMS raises its fees.

To use eDocs and USDA's associated Electronic Trade Document Exchange (eTDE) system, suppliers must first register for a level-2 USDA e-Authentication account, which requires an in-person visit to a USDA service center. Each individual who will be requesting certificates must register to use the system—there is no companywide registration. For more information on eDocs registration, [click here](#).

USDEC, AMS Dairy Grading, AMS Information Technology, USDA's Foreign Agricultural Service and Acentia (a private systems developer) all played critical roles over the course of the project.

"All parties worked tirelessly to bring this system to life, and we are eager to see the benefits to the industry and government," says Benson. "eDocs is a major step forward in transitioning to all-electronic documentation, but we still have a ways to go before we are completely paperless. In fact, AMS will maintain issuing paper certificates for the time being, as we continue to work as a team to finalize implementation across the EU and introduce it elsewhere in the world, starting in China."

Once paper certificates are completely eliminated, the system will bring another set of benefits in reduced costs from eliminating the need to courier health certificates overseas. There are also efforts underway to broach the subject of electronic commercial documents with Customs authorities, which has the potential to eliminate the need to courier paper overseas altogether.

Says Benson, "These types of long-term development projects are perfect examples of how industry and government can work together to do the heavy technical lifting needed to resolve issues that limit the U.S. dairy industry's ability to fully capitalize on rising export demand." ■ ■ ■

DATA Snapshot

Capitalizing on steady global demand, faltering production from other nations and favorable pricing, U.S. dairy suppliers set an export record in the first half of 2013. Export sales rose 16 percent (compared to January-June 2012) to \$3.168 billion. Aggregate U.S. shipments of milk powder, whey proteins, cheese and butterfat grew 9 percent compared to a year ago, and the United States gained global market share. Through the first six months of the year, U.S. suppliers exported 14.7 percent of milk production (total solids basis), a significant increase from the 13.5 percent shipped in the first half of 2012. ■■■■

SMP Exports Jan. – June (volume, MT)

Country	2011	2012	2013	% chg
US	218,033	241,664	265,475	+10
EU-27	244,416	295,316	204,456	-31
NZ	190,972	178,024	201,302	+13
Australia	77,838	79,500	52,902	-33
Argentina	9,741	5,871	8,252	+41
SUBTOTAL	741,000	800,375	732,387	-8

Whey Products Exports Jan. – June (volume, MT)

Country	2011	2012	2013	% chg
EU-27	217,675	266,422	260,886	-2
US	217,500	233,768	246,349	+5
Argentina	30,328	28,110	39,805	+42
Australia	17,577	26,144	20,836	-20
NZ	17,348	17,161	15,571	-9
SUBTOTAL	500,428	571,605	583,447	+2

Cheese Exports Jan. – June (volume, MT)

Country	2011	2012	2013	% chg
EU-27	328,032	362,729	390,640	+8
NZ	124,427	146,479	151,242	+3
US	119,569	140,618	148,756	+6
Australia	85,217	78,845	90,479	+15
Argentina	22,871	28,231	23,474	-17
SUBTOTAL	680,116	756,902	804,591	+6

Lactose Exports Jan. – June (volume, MT)

Country	2011	2012	2013	% chg
US	152,524	155,440	178,748	+15
EU-27	69,867	76,535	67,559	-12
NZ	10,301	9,345	11,790	+26
SUBTOTAL	232,692	241,320	258,097	+7

Butterfat Exports Jan. – June (volume, MT)

Country	2011	2012	2013	% chg
NZ	199,654	231,325	233,557	+1
EU-27	65,858	59,598	58,299	-2
US	39,759	28,684	32,218	+12
Australia	18,447	24,555	23,132	-6
Argentina	10,473	9,311	7,330	-21
SUBTOTAL	334,191	353,473	354,536	+0

WMP Exports Jan. – June (volume, MT)

Country	2011	2012	2013	% chg
NZ	608,128	624,130	644,105	+3
EU-27	219,598	211,089	181,442	-14
Argentina	79,559	93,486	68,015	-27
Australia	57,338	54,545	43,903	-20
US	10,002	11,647	13,087	+12
SUBTOTAL	974,625	994,897	950,552	-4

Sources: USDA, Global Trade Atlas

U.S. dairy export data is just a click away!

For the latest export trade data, click [here](#).

For more information about the resources provided by the U.S. ingredients program at USDEC, or to learn the latest information on dairy-related research and information, visit www.innovatewithdairy.com.

To view a current list of USDEC members, click [here](#).



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