

Belying Up to Breakfast

Innovating portable breakfast options with a health and wellness focus will help capture breakfast skipper sales. Dairy ingredients are an important tool to help make consumer-desired portable choices a reality.

by Mary Higgins

Breakfast has long been touted as the most important meal of the day, offering consumers the opportunity to start the morning off on the right note. Yet for many, a regular morning meal is not a reality. Today, 93 percent of Americans agree that breakfast is the most important meal of the day, but only 44 percent say they eat breakfast every day.¹ In fact, 18 percent of adults and children 2 to 18 years old are classified as breakfast skippers.²

Breakfast skipping is a global issue. The rise in fast-paced, urban lifestyles in major developed and emerging markets is contributing to changes in eating patterns and intake, including breakdowns in traditional breakfast consumption patterns across the globe. "Time pressures are major inhibitors

to eating breakfast regularly in the United States, and as other markets adopt a more western lifestyle, they will face this same challenge and the same repercussions if when they skip this meal," says Kristi Saitama, vice president, export marketing ingredients, US Dairy Export Council.

Obesity Link

In fact, recent studies in Germany³ and Iran⁴ both corroborate that skipping breakfast was associated with childhood obesity. Individuals who skip breakfast often compensate by overeating in the evening, which is a trend seen worldwide.⁵ Innovating portable breakfast options with a health and wellness focus will help capture breakfast skipper sales, which can lead to strong growth

over time. Already, data shows that more than 25 percent of US adults eat breakfast away from home.⁶

"At breakfast, consumers tend to adhere to routine meal choices. Getting in on the breakfast mix can drive repeat long-lasting sales," notes Rebecca MacKay, vice president, strategy, insights and planning with the Innovation Center for US Dairy.

Dairy ingredients are an important tool to help make innovative, consumer-desired portable choices a reality. With a high level of versatility and functionality for processors, impressive nutrient profile, pleasing flavor and the fact that consumers inextricably link many dairy products with health and wellness,⁷ whey and milk proteins, along with cheese and yogurt, are strong players to help best align new breakfast products with consumer demands.

"As these trends continue, we see excellent opportunities for manufacturers to leverage US dairy ingredients to help meet this growing need for nutritious product offerings in other countries," Saitama believes.

Protein Power

Protein is an essential daily nutrient that plays many important roles, such as repairing the body's cells, building and repairing muscles, helping build and maintain bones and helping control many metabolic processes.⁸

A number of studies indicate that eating protein at breakfast promotes satiety, lean body mass

preservation, weight management and nitrogen balance.^{9, 10}

"It's no secret that breakfast helps set the stage for a healthy day and that protein should have a starring role, especially for seniors," says Keigan Parks, Ph.D., director, nutrition research, Dairy Research Institute.

Increasing protein consumption among this group likely promotes greater functional status of the muscle, which improves gate and mobility.¹¹ Thus, there may be less likelihood for fall-related injuries to bones, such as hip fractures.

Additionally, new research has indicated physiological differences after consumption of a protein-rich breakfast versus a carbohydrate-rich breakfast.¹² Further science demonstrates the need to space protein intake throughout the day, rather than end loading it at dinnertime, a common practice.¹³

The value of this macronutrient is not lost on consumers, who believe protein can provide benefits pertaining to satiety, post-exercise recovery and energy,¹⁴ and place high value on this nutrient. In fact, 55 percent say they're trying to get more protein in their diet versus a year ago¹⁵ and 26 percent say they're actually consuming more protein than two years ago.¹⁶

Additionally, emerging markets tend to show increased consumption of animal proteins as the gross domestic product increases. This indicates that regions such as Southeast Asia could be prime targets for protein-related products, according to a analysis of the 2011 Bain &



This snack combines the delicious richness of Greek-style yogurt with savory vegetables and herbs.

Company Dairy Globalization – Threats, Opportunities and Implications Report, conducted in association with the Innovation Center.¹⁷

The Morning Void

Today's breakfast choices are often lacking in protein content. In fact, most Americans consume fewer than 10 grams of dietary protein, which is less than 15 percent of total daily protein intake, during this eating occasion.^{18,19} Typical American breakfast foods such as toast, bars, waffles, pancakes, juice and pastries are most often low in protein. Another North American and western European staple, breakfast cereal may contain only 2 to 3 grams of protein per serving.²⁰

As these choices grow in popularity across the globe, there are potential protein deficits where consumers are moving away from traditional higher-protein options to these low protein foods.

"We're seeing a surge in the consumption of bread and pastry breakfast options among younger females in Japan as well as in more-affluent, coastal cities in China," Saitama said. "Whereas traditional breakfast choices often included a source of protein, these newer, westernized options tend to be lower in protein, indicating a potential void."

Boosting Nutrition

Dairy ingredients provide a substantial amount of quality protein. In fact, whey protein is

a high-quality dairy protein that contains all the amino acids the body requires for muscle protein synthesis. It is fast-acting and easily digested. Plus, research indicates that whey protein, but not soy protein, leads to lower body weight, body fat and waist circumference compared with carbohydrates.²¹

Whey and other dairy ingredients are ideal for a range of breakfast applications, including convenience foods that can help entice breakfast skippers to participate in this eating occasion.

"Dairy ingredients don't just pack a protein punch, they contribute valuable micronutrients and supply a host of functional benefits," notes Vikki Nicholson, senior vice president, global marketing, US Dairy Export Council.

"The versatility of dairy ingredients, including whey, milk protein, yogurt and cheese, allows for easy incorporation into breakfast options, whether used for smoothies, in baked goods or formulated into other breakfast favorites that deliver on consumer needs."

A Better Breakfast

The food industry has begun offering breakfast items with protein, but innovation is still needed to meet the demand for better breakfast foods. Dairy ingredients provide strong opportunities to create consumer-pleasing options.

Whey protein works well in beverage applications and baked goods. Milk protein can also be used in these formulations:

Table 1: Key Consumer Interests

An ever-westernizing world feeds high consumer demands for breakfast:

- **Nutritious options that take advantage of the high level of control consumers have at this occasion**
 - Hot cereals and yogurts are among the fastest-growing breakfast foods.
- **Portability**
 - Over time, consumers have tripled the amount of breakfast meals carried from home and quadrupled the amount they consume in cars.

• **Smoothies:** Often combining whey protein and milk or yogurt with fruit, smoothies pack protein while hitting on portability and health and wellness drivers. Formulations can even provide a functional benefit, such as the Honey Lavender Smoothie's stress-reducing focus.

• **Enhanced coffee beverages:** Cappuccino or café au lait are also options to give breakfast a protein jolt. In fact, coffee is a predominant food in the 12 distinct breakfast patterns for adults 19+,²² which indicates it could be an important focus area. Plus, hydrolyzed whey proteins work well in coffee-based beverages because the slightly bitter notes blend well with the overall flavor profile.

• **Protein waters:** Protein waters at breakfast offer nutritional benefits along with refreshment. Whey protein is an excellent resource in formulating these types of beverages because it provides a clean, neutral flavor and excellent clarity, while minimizing sediments.

• **Lower-carb apple cranberry muffin:** At only 110 calories, this muffin still delivers a protein punch, delivering eight grams

of the macronutrient. It is a healthier twist on a highly portable breakfast favorite.

Appetizing Fare

In addition to smoothies, yogurt offers formulators a host of options for appetizing breakfast fare, such as:

• **Protein-packed waffles:** Fused with yogurt and served with a yogurt dipping sauce, this waffle is an excellent source of protein. With 13 grams of this macronutrient, this breakfast option offers up the consumer-sought satiety benefit by combining yogurt and whey protein concentrate.

• **Greek yogurt breakfast muffin:** This prototype was a standout during the 2012 USDEC concept screen testing. 48 percent of participants indicated they would definitely or probably buy this product, and qualitative research attests to their desire for more healthful muffin options.

Savoring Innovation

As one of the most craved foods,²³ cheese can be an excellent option to enhance the protein content of more savory breakfast options, including:

• **Hash brown casserole:** This hearty dish offers consumers an opportunity to get a hot meal quickly. Made with aged cheddar, the casserole offers 10 grams of protein, which makes it a great option to help space protein intake throughout the day.

• **Hispanic-style bagel bites:** Oaxaca cheese and chorizo provide bold flavors that suit the preferences of today's consumers and nine grams of protein.

• **Cheese-filled breakfast bite:** Delivering convenience and high portability, this morning meal also provides an impressive 21 grams of protein per serving. Additionally, the use of whey permeate limits the bites' sodium content.

The Sweet Spot

"The sweet spot for formulators is when you identify ingredients that complement the application while also providing a nutritional benefit," said Kimberlee Burrington, dairy ingredients coordinator at Wisconsin Center for Dairy Research at University of Wisconsin-Madison. (WCDR is part of the National Dairy Foods Research Center Program, funded by USDEC partner Dairy Research Institute). "Across the board, dairy ingredients get high marks in terms of flavor, functionality and nutrition, making them key players when innovating new breakfast options."

Beyond the examples provided, whey can also be formulated into breakfast sandwiches,

which may contain meat or cheese to achieve a 20- to 30-gram protein target. Additionally, industry partners at the Dairy Products Technology Center at California Polytechnic State University developed an egg substitute using whey protein that is lower in fat and cholesterol but doesn't compromise on taste.

Food manufacturers looking for novel breakfast options can find a variety of formulations, including specs for the above examples, at InnovateWithDairy.com. Additionally, WheyForYou.com offers sample consumer-focused breakfast menus that provide 20 grams of protein or more.

Explore the Opportunities

Any way you slice it, breakfast represents a promising opportunity, and dairy ingredients are a strong fit for the portable, nutritious, protein-packed choices that consumers are craving. Today the number of breakfasts that Americans carry from home has tripled.²⁴ With this trend spreading across the globe, now is the time to take a fresh look at innovating to-go breakfast items armed with dairy ingredients' nutrition and protein power. ♦

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A full list of references is available at www.foodingredientsfirst.com

Table 2: Benefits of Using Dairy Ingredients for Breakfast

Milk protein concentrate:

- Adds dairy protein and calcium.
- Helps build body and texture of the bread.

Whey protein concentrate:

- Boosts protein content and is easily digested and absorbed by the body.
- Contains all of the essential amino acids required for good health.

Cheese as an ingredient

- Taste
- Nutrition, etc.

Nonfat dry milk powder:

- Helps build body and texture of the bread.
- Contributes to browning of the crust.

Whey permeate:

- Enhances flavors and salt perception, allowing for a reduction in added salt.
- Improves surface browning while providing a clean dairy flavor.

Yogurt as an ingredient:

- Contains important nutrients found in milk, like protein and calcium.



This portable chewy snack, made with whey protein and whole milk, is dried and shaped to resemble beef jerky.