

Fifth Annual New Product Competition 2016 – Innovative Products for Physical or Mental Energy

National Dairy Council® selected three outstanding student product development team finalists in its fifth annual New Product Competition. The National Dairy Council New Product Competition provides a platform for tomorrow's product developers to showcase their knowledge and expertise in novel ways to use dairy proteins, calcium and other dairy nutrients in products. The 2016 competition challenged university teams to create a new dairy or dairy-based product for people who want physical or mental energy.

The teams, exemplifying innovation by university students in new product development for dairy, are:

- **Beyond the Bar** — Iowa State University
- **Hearty Heifers** — The Pennsylvania State University
- **Panikotta** — North Carolina State University



These formulations are being shared with food and beverage manufacturers to help drive on-trend innovations for dairy-based foods and beverages, and ingredients that fit the needs of the consumers seeking more energy.

Learn more about the contest and all of the prototypes at usdairy.com/Science-and-Research/Product-innovation/New-Product-Competition

Energy: opportunity to grow with dairy

This year's competition focuses on developing new dairy products that make dairy the go-to food/beverage for people who want physical or mental energy. Consumer research shows:

1. Energy needs are distinct and most are currently being met, but there are clear opportunities for dairy.
 - Not all needs are being met; energy sources for late afternoon and evening are lacking. Many consumers are habitual with their energy fixes, often unaware of new options.
 - Consumers seek specific messaging cues to help determine which products are best for specific needs.
2. Most consumers do not readily think of dairy as a go-to for energy, so there is a need to educate them.
 - Consumers are often unaware that a serving of dairy offers a significant amount of high-quality complete protein, positively impacting consumer energy needs.
 - Some consumers haven't considered dairy because of a misperception that it has little impact on improving energy levels.
3. Consumers are looking for more natural, complete solutions for their energy needs. How can dairy leverage its inherent goodness?
 - Consumers will look for natural, less artificial energy boosts in the future.
 - i. They are actively considering ways to increase energy through modifying their overall health habits/practices rather than depending on traditional energy solutions (e.g., soda, energy drinks).

This competition is another way National Dairy Council is encouraging the product developers of tomorrow to showcase novel ways to use dairy proteins, calcium and other dairy nutrients in products that help meet consumer needs.

Think U.S. Dairy for on-trend innovations

The Global Marketing Program of the U.S. Dairy Export Council® (USDEC) works with food and beverage manufacturers to develop products that appeal to consumers worldwide and accelerate growth by providing:

- Information and resources to help successfully develop and position products
- A vast network of research through affiliated dairy checkoff organizations on dairy ingredients, functionality and trends

For more prototype ideas, visit ThinkUSAdairy.org.

2016 Competition Finalists

(listed in alphabetical order)

Beyond the Bar — Iowa State University

Looking for a snack alternative to the everyday ice cream sandwich to eat after a workout or to combat a late afternoon energy slump? Beyond the Bar frozen yogurt sandwich flavored with matcha green tea may fit the bill. It packs 14 grams of protein per 70g serving, so it is an excellent source of protein. A chocolate swirl through the bar provides energy with a touch of indulgence. Beyond the Bar is made with 59% dairy ingredients, including Greek yogurt and milk protein concentrate 85 (MPC85).

Ingredients:

Yogurt (Greek-style yogurt, MPC85, cream, skim milk, sugar, egg yolks, stabilizer/gum blend, water), wafer (whole-wheat flour, oats, brown sugar, canola oil, low-fat milk, egg white, vanilla extract, modified food starch, baking soda), energy swirl (water, cocoa powder, sugar, honey, vanilla extract, salt TIC gums POR).



Nutrition Facts	
Serving Size (70g) Servings Per Container	
Amount Per Serving	
Calories 190	Calories from Fat 60
% Daily Value*	
Total Fat 6g	9%
Saturated Fat 3g	15%
Trans Fat 0g	
Cholesterol 45mg	15%
Sodium 55mg	2%
Total Carbohydrate 19g	6%
Dietary Fiber 1g	4%
Sugars 16g	
Protein 14g	
Vitamin A 4%	Vitamin C 0%
Calcium 4%	Iron 2%

*Percent Daily Values are based on a 2,000 calorie diet. Your daily values may be higher or lower depending on your calorie needs.

Calories	2,000	2,500
Total Fat	Less than 65g	80g
Saturated Fat	Less than 20g	25g
Cholesterol	Less than 300mg	300mg
Sodium	Less than 2,400mg	2,400mg
Total Carbohydrate	300g	375g
Dietary Fiber	25g	30g

Calories per gram:
Fat 9 • Carbohydrate 4 • Protein 4

Hearty Heifers — The Pennsylvania State University

Unlike chips, crackers or other salty snacks, Hearty Heifers are cheese crisps that provide a concentrated source of nourishment pre- or post-workout, or anytime. Hearty Heifers are gluten-free and baked with real cheese and whey protein. Each 15-cracker serving provides 140 calories and 1g of carbohydrate, is packed with 17g of dairy protein (an excellent source) and is a good source of B vitamins, calcium and zinc. Current flavors include Cheddar, Parmesan and pepper jack, but they can be made from a variety of different cheeses. Hearty Heifers taste great eaten alone or with fresh fruits, milk or other beverages.



Nutrition Facts	
Serving Size 15 Cows (28g) Servings Per Container 2	
Amount Per Serving	
Calories 140	Calories from Fat 70
% Daily Value*	
Total Fat 8g	12%
Saturated Fat 4g	20%
Trans Fat 0g	
Polyunsaturated Fat 1.5g	
Monounsaturated Fat 2.5g	
Cholesterol 30mg	10%
Sodium 125mg	5%
Total Carbohydrate 1g	0%
Dietary Fiber 0g	0%
Sugars 0g	
Protein 17g	
Calcium 10%	Iron 20%
Riboflavin 20%	Vitamin B6 20%
Vitamin B12 20%	Zinc 20%

*Percent Daily Values are based on a 2,000 calorie diet. Your Daily Values may be higher or lower depending on your calorie needs.

Calories	2,000	2,500
Total Fat	Less than 65g	80g
Sat Fat	Less than 20g	25g
Cholesterol	Less than 300mg	300mg
Sodium	Less than 2,400mg	2,400mg
Total Carbohydrate	300g	375g
Dietary Fiber	25g	30g

Ingredients:

Cheese, butter, water, whey protein blend (whey protein isolate, micellar casein, sunflower lecithin, xanthan gum, cellulose gum), egg yolk, ferric orthophosphate, zinc oxide niacinamide, thiamine mononitrate, riboflavin, pyridoxine hydrochloride, cyanocobalamin.

Panikotta — North Carolina State University

Putting a Greek spin on an Italian classic, Panikotta is a new version of the authentic Italian dessert, panna cotta. Its smooth and creamy honey vanilla base is made with ultrafiltered whole milk combined with 2% Greek yogurt and cultured nonfat dry milk. Multicompartment packaging houses mango fruit coulis and candied ginger bits for toppings that add refreshing, invigorating flavors. With 10g of protein per serving, Panikotta is an excellent source of protein and is a good source of calcium and vitamins A and C. Its smooth texture and fresh ingredients make Panikotta a great dairy snack to enjoy any time of day.



Nutrition Facts	
Serving Size 1 container (175g)	
Amount Per Serving	
Calories 180	Calories from Fat 30
% Daily Value*	
Total Fat 3.5g	5%
Saturated Fat 2g	10%
Trans Fat 0g	
Cholesterol 15mg	5%
Potassium 40mg	1%
Sodium 65mg	3%
Total Carbohydrate 27g	9%
Dietary Fiber 0g	0%
Sugars 24g	
Protein 10g	
Vitamin A 25%	Vitamin C 10%
Calcium 15%	Vitamin D 8%

*Percent Daily Values are based on a 2,000 calorie diet. Your Daily Values may be higher or lower depending on your calorie needs.

Calories	2,000	2,500
Total Fat	Less than 65g	80g
Sat Fat	Less than 20g	25g
Cholesterol	Less than 300mg	300mg
Sodium	Less than 2,400mg	2,400mg
Total Carbohydrate	300g	375g
Dietary Fiber	25g	30g

Ingredients:

Ultrafiltered whole milk, Greek yogurt, mango base (mango puree, water, honey, lemon juice, natural flavoring), honey, candied ginger (ginger, sugar) gelatin, cultured nonfat dry milk (preservative) and natural flavoring.