

2024 New York State Dairy Promotion Order Annual Report

Overview

The Division of Milk Control and Dairy Services at the New York State Department of Agriculture and Markets is responsible for the administration of the New York State Dairy Promotion Order (NYSDPO). The NYSDPO was proposed and approved by a referendum vote by New York dairy producers to promote the consumption of New York milk and dairy products. Dairy producers have an obligation to the National Dairy Research and Promotion Program of fifteen cents per hundredweight of all milk produced. The NYSDPO collects an assessment at the rate of ten cents per hundredweight. This decreases New York dairy producers' obligation to the national program and allows the ten cents to remain in New York. The Dairy Promotion Advisory Board, comprised of New York State dairy producers, provides advice and recommendations to the State Commissioner of Agriculture and Markets on how these funds should be spent, in line with the following goals:

1. Increase the consumption of New York milk and dairy products by youth (lunches, breakfasts, and other offerings);
2. Promote the uniqueness of, and increase sales of, New York milk, dairy products, and/or ingredients throughout the entire food supply chain through various distribution channels and partnerships, including but not limited to, e-commerce, curbside sales, etc.;
3. Proactively improve the image of dairy products and/or dairy producers farming practices among consumers, thus improving the acceptance and consumption of New York milk and dairy products;
4. Improve communication with dairy producers and dairy stakeholders to inform them of how they can assist in improving the consumption of New York milk and dairy products by highlighting the sustainability story;
5. Increase the sales and consumption of milk and dairy products produced in the United States and exported to other countries;
6. Participate in national programs influencing increased consumption of milk and dairy products;
7. Conduct research projects that create new products and/or enhance the safety, quality, and sensory attributes to expand the demand for New York dairy products and dairy ingredients;

8. Create target marketing to promote the consumption of New York State milk and dairy products to Gen Z (ten to twenty-three years old);
9. Develop and implement marketing strategies that are inclusive of the socially diverse population to increase the consumption of New York State milk and dairy products; and
10. Develop a research study identifying opportunities and challenges to the vitality of the dairy industry that can be used to educate consumers ensuring the growth of dairy products.

According to the United States Department of Agriculture (USDA), United States per capita consumption of dairy products is increasing. However, the per capita consumption of fluid milk products continues to decline.

United States Per Capita Consumption of Fluid Milk and Dairy Products (Pounds)

	2019	2020	2021	2022	2023	% Change 2019-2023
Fluid Milk Consumption	141	141	134	130	128	-9.2%
Dairy Product Consumption (Including Fluid)	651	651	661	654	661	+1.4%

New York State regulations (1 NYCRR Part 40; Section 40.35) require that an annual report be prepared each year for the benefit of the producers. Specifically, this report “shall contain information on the promotion programs carried on during the preceding year, expenditure of funds for each program, and such other information as may be of benefit to producers.”

The NYSDPO budget for the 2024 contract year had available funds for promotion and research activities of \$17 million. During 2024, the NYSDPO contracted with eleven organizations for projects that totaled \$16,999,580.

Award recipients were asked to submit a summary of their work for the 2024 contract year. The submissions are included below and solely represent the language and opinions of the award recipients and their supporting organizations.

Promotional Contracts, Summaries, and Metrics: 2024 Calendar Year

American Dairy Association North East (ADANE)

www.AmericanDairy.com

Contract Awarded: \$10,500,000

Summary of Company: ADANE is a farmer-directed and funded non-profit organization that works to enhance consumers' understanding of and appreciation for dairy farmers and dairy products by engaging local farmers, cultivating a dialogue with consumers, and advancing the dairy industry at the state and national level. ADANE builds sales and consumer trust by creating demand for dairy products through retail, e-commerce, schools, digital and traditional media, and enlisting the help of local dairy advocates to "tell dairy's story."

Priority Areas Addressed:

Goal #1 - Increase the consumption of New York milk and dairy products by youth (lunches, breakfasts, and other offerings).

Proactively Protecting and Promoting New York State Dairy in Schools to Increase Sales and Consumption

Budget: \$2,219,407

This project focused on ongoing proactive and protective strategies to remain on the critical path towards growing sales, expanding trust, and keeping dairy integral to child nutrition programs, thus building lifelong dairy consumers.

- Efforts to increase school meal participation to sell more milk and dairy resulted in 26.1 million additional school breakfasts and lunches sold and 11.7 million additional pounds of milk.
- Incremental cheese and yogurt sales, respectively 113% and 162%, were attained through proven dairy sales menu enhancement programs: Just Say Cheese and Yogurt All Ways. Hot Chocolate Milk and MooLatte programs adding incremental milk sales were successfully implemented across 15 school districts.
- Summer Meals publication netted 7.9 million impressions; 600 school districts received downloadable resources; four received immersive activities to promote awareness and dairy-inclusive meal availability.
- Strategic alliances helped reach over 5,000 critical stakeholders through digital and print media, conferences, sponsored training, and more to secure dairy program placements and protect dairy in child nutrition programs.
- New York Thursdays' farm-to-school program reached 982,068 students across 2,646 schools; educational summits and farm tours reached school administrators, highlighting dairy's benefits and sustainability efforts.
- The Fuel Up program kept doors open for dairy marketing; 3,755 schools enrolled, impacting over two million students.

Priority Areas Addressed:

Goal #2 - Promote uniqueness of, and increase sales of, New York milk, dairy products and / or ingredients throughout the entire food supply chain through various distribution channels including but not limited to, e-commerce, curbside sales, etc.

Proactively Protecting and Promoting Dairy at Retail Outlets

Budget: \$1,918,002

ADANE's retail team designed, initiated, and directed programs that cover e-commerce, large and small retailers, food banks and charitable efforts funded through government grants. ADANE staff worked with dairy managers, category directors, vice presidents of marketing, and retail dietitians to grow dairy category sales.

E-commerce: Inform customers of dairy's freshness, nutritional value, and that it comes from local farms to build trust and sales throughout the consumer's digital path to purchase. 2024 programming for milk-based dairy products achieved 26,002,717 impressions and additional attributed product sales of \$3,016,847 (Waiting on results from December programs.)

Dairy Aisle Reinvention (DAR) is the in-store program that creates the best in-store dairy shopping experience for retail customers to increase dairy sales. The program utilizes multiple merchandising elements to modernize the look of the aisle and inspire consumers to purchase additional dairy items. Implemented new signage in 117 stores, initiated the installation of 56 stores with yogurt dividers and 60 stores with cheese pushers.

Yogurt Dividers: Customized yogurt category shelf merchandising and inventory management system:

- Total of 56 stores installed yogurt dividers
- Price Chopper- 49 stores installed. Chain now completed, over \$480,000 invested by retailer
- ShopRite- Five new stores, chain completed, over \$1.5 million invested by retailer.
- Two independent retailers now have yogurt dividers

Cheese Pushers: Cheese category shelf merchandising and rotation system for brick, shred, and sliced cheeses. Total of 60 stores between ShopRite, Weis, and Acme implemented in 2024. Single store rest results:

- 14% increase in product facings
- 5% sales lift results
- Labor savings, rotation improvement and elimination of damaged packaging
- 30 NEW facings between shred, string, and sliced cheese varieties

- Total shelf holding INCREASED by 480 Units
- Retailer investment of over \$540,000 into system implementation

The Local Farmer Image signage program incorporated local farmer images and their stories in customized, retailer-specific sign packages. This was implemented in 273 new stores. Price Rite is now featuring two farms in 30 stores. Ten local dairy farms are featured in retail stores, including Tops, ShopRite, Key Food, Walmart, and independent retailers. National Farmers Day and June Dairy month programs have expanded into Tops, Acme, and Price Chopper.

The Dairy Aisle Performance Program (DAPP) is a retail audit and awareness system that addresses execution at store level.

- The team assessed 1,004 stores with 4,074 retail visits.
- 80% of program stores had clean or improved hygiene conditions because of relayed education on hygiene best practices to retail management.
- Cross merchandising was completed with 845 new placements, with an additional 694 secondary allocations of dairy products in program stores that have been maintained since implemented.
- Mitigated stock replenishment issues to increase shelf holding power for milk by 195 feet in Tops and by 119 feet in Acme stores.

Nutrition Counseling and Support - Retail Dietitians Work with key retail accounts that invest in Retail Dietitian programs to provide education and dairy messaging for in-store and virtual activations. 71 engagements were completed in 2024. This exceeded goals and expectations in the primary year of the retail dietitian program by 39%. The most popular campaign amongst retail dietitians in 2024 was June Dairy Month.

The Fill a Glass with Hope program raised \$91,459 in 30 accounts from consumers that food banks used to purchase milk to give to the food insecure.

The Cold Infrastructure program placed eight coolers in food banks. Sufficient coolers are currently in food banks, as they have placed 50 coolers in the last three years. Currently, direct delivering 30 accounts at least every other week with pantries buying the milk through Upstate.

Food Bank Purchasing program increased buying milk through The Emergency Food Assistance Program (TEFAP), receiving \$768,604 in milk, and through Nourishing NY of \$288,000. Total of \$1,056,604 obtained for milk purchasing.

Priority Areas Addressed:

Goal #3 - Improve the image of dairy products and/or dairy producers among consumers, thus improving the acceptance and consumption of New York milk and dairy products.

Enhancing the Image of New York Dairy through ADANE's Strategic Marketing in 2024

Budget: \$1,802,992

ADANE's consumer-focused marketing strategy significantly bolsters the reputation of New York dairy products and farmers by empowering them to share their genuine and engaging stories. These narratives illustrate the commitment of dairy farmers to animal welfare, environmental sustainability, and the production of nutritious products for both local communities and the global market.

By showcasing these authentic stories, ADANE cultivates a trustworthy image for the dairy industry, which in turn increases consumer confidence and drives the acceptance and consumption of New York milk and dairy products. This approach not only supported producers' business growth and fostered brand loyalty but also established a positive and sustainable market presence for New York dairy in 2024.

ADANE Connects with Consumers "Where They Are" Through:

Digital and Social Media Marketing

- Website visits: 1,795,687
- Social media impressions: 119,454,883
- Social media engagement: 3,092,374
- Search engine marketing impressions: 7,561,834

Consumer Events

- Number of events: 52 (Double the number of events in 2023)
 - Engaging directly with consumers through tastings, farm tours, and community gatherings to build personal connections and trust.

Traditional Media

- Story placements: 2,389
- Total impressions: 460,472,659
 - Leveraging television, radio, print, and online news to reach a broad audience and reinforce the positive image of New York dairy.

New York State Dairy Image Campaigns

- Omnichannel: 30

- Digital Geotargeting: Four

Health and Wellness

- Successfully engaged 5,000 health professionals through targeted educational training programs and resources aimed at promoting increased dairy consumption.

Impact on New York Dairy: ADANE’s comprehensive marketing efforts create a reliable and appealing image of the dairy industry, encouraging consumers to choose New York milk and dairy products with confidence. By effectively communicating the values and practices of dairy farmers, ADANE not only enhances the industry's reputation but also ensures sustained growth and loyalty among consumers. This strategic positioning helped secure a lasting and positive presence for New York dairy in the competitive marketplace of 2024.

Priority Areas Addressed:

Goal #4 - Improve communication with dairy producers and dairy stakeholders to inform them how they can assist in improving the consumption of New York milk and dairy products by highlighting the sustainability story.

Coaching and Supporting New York State Farmers to Proactively Promote and Sell Dairy

Budget: \$1,038,067

- Provided communications training to 233 farmers and engaged 82 dairy farmers as spokespersons in ADANE programs.
- 101 grassroots farm tours were supported with materials/signage. Virtual Farm Tours of New York dairy farms reached 54,994 students. Adopt a Cow and Discover Dairy programs reached 76,232 and 67,307 students respectively.
- New York State Dairy Ambassador completed an internship with ADANE and Ambassadors presented to four consumer audiences and six state-level farm audiences.
- American Dairy ENGAGED involved 50 farmers in social media campaigns and six farmer influencers reached 2,982,195 consumers with positive dairy messaging.
- Developed relationships with 11 environmental organizations, secured dairy presence at 10 environmentally focused events and hosted three events for environmental audiences. Collaborated to publish 169 social posts on dairy’s environmental practices and conducted one environmentally themed media campaign.
- Produced one newsletter, an annual report, 105 placements in dairy trade publications reaching 7,650,000 impressions, and 109 digital news updates with a 33.9% open rate.
- Engaged with 178 key dairy farmer leaders and targeted social posts to dairy

farmers achieved 21,706 link clicks.

- Core Crisis Team handled 40 issues, provided stakeholder support to two farms, held one training exercise and shared weekly communications with key, national partners.

Priority Areas Addressed:

Goal #8 - Create target marketing to promote the consumption of NYS milk and dairy products to Gen Z (10-23 years old).

ADANE's Strategic Marketing Initiatives Targeting Gen Z to Boost New York Dairy Consumption

Budget: \$483,398

In 2024, ADANE launched a dynamic digital-first marketing strategy to elevate the consumption of New York milk and dairy products among Gen Z consumers. By leveraging popular platforms such as TikTok, Instagram, and Snapchat, ADANE created engaging and shareable content that resonated with this tech-savvy generation.

Collaborations with influencers and content creators who authentically connected with Gen Z audiences further amplified the promotion of dairy products making them relatable and appealing, and generating 19,419,014 social media impressions and 612,007 social media engagements.

ADANE also prioritized sustainability and ethical practices, aligning with Gen Z's strong values. The campaigns highlighted sustainable farming methods and initiatives to reduce the carbon footprint, showcasing the dairy industry's commitment to environmental stewardship. Transparency was key, with clear and honest information provided about sourcing, production processes, and animal welfare standards, building trust and credibility among consumers.

Through these targeted efforts, ADANE successfully enhanced the image of New York dairy products, driving increased acceptance and consumption among Gen Z consumers. By addressing their preferences for digital engagement, sustainability, and transparency, ADANE not only strengthened brand loyalty but also positioned New York dairy as a forward-thinking and trustworthy choice in a competitive market.

Priority Areas Addressed:

Goal #9 - Develop and implement marketing strategies that are inclusive of the socially diverse population to increase the consumption of New York State milk and dairy products.

Budget: \$326,978

Under the banner of "Dairy is for Everyone," ADANE launched several multicultural campaigns that highlighted the inclusivity of nutritious and delicious dairy products across diverse cultural backgrounds, ethnicities, and lifestyles. New York dairy farmers proudly sponsored The Strong National Museum of Play in Rochester's Hispanic Heritage Celebration, where they curated Spanish-language dairy-centric recipes and expanded the Spanish-language blog "Novedades" on AmericanDairy.com.

Additionally, ADANE served as the presenting sponsor for the museum's "Juneteenth Celebration," featuring the launch of Savor Recipes' new digital cookbook, "Soulful Creations." During this event, over 3,000 cheese samples were distributed, engaging attendees, and showcasing the versatility of dairy products.

ADANE's culturally sensitive marketing initiatives in 2024 delivered outstanding results, generating 45,129,946 social media impressions and 1,927,219 social media engagements through digital and social media channels alone. Furthermore, the "Dairy is for Everyone" campaign achieved extensive traditional media coverage, solidifying ADANE's commitment to making dairy products accessible and appealing to all consumers.

These efforts not only reinforced the inclusivity and appeal of New York dairy but also demonstrated ADANE's dedication to celebrating and supporting the diverse communities it serves.

ADANE's Participation in National Program – Dairy Management Inc.

Priority Areas Addressed:

Goal #5 – Increase the sales and consumption of milk and dairy products produced in the United States and exported to other countries.

Goal #6 - Participate in national programs influencing increased consumption of milk and dairy products.

Budget: \$2,711,156

Please see Dairy Management Inc.'s section for a summary and breakdown of its initiatives and metrics.

New England Dairy Promotion Board (NEDPB)

www.newenglanddairy.com

Contract Awarded: \$ 1,650,000

Summary of Company: Since 1920, New England Dairy Promotion Board, a dairy checkoff organization, has represented New York and New England dairy farmer interests in schools and with thought leaders, the dairy supply chain, consumers, and media to promote dairy's science-based health benefits and sustainable farming practices. They are staffed by registered dietitians and marketing communications professionals. Our focus is building trust and sales for dairy in five New England states, a key market for New York dairy. Their programs are informed by current consumer insights and dairy farmer perspectives. By leveraging national and local partners, they maximize program impact and dairy farmer investment.

Area 1: Increase trust in dairy among our target audiences.

Priority Areas Addressed:

Goal #3 - Proactively improve the image of dairy products and / or dairy producers' farming practices among consumers, thus improving the acceptance and consumption of New York milk and dairy products.

Goal #4 - Improve communication to dairy producers and dairy stakeholders to inform them how they can assist in improving the consumption of New York milk and dairy products by highlighting the sustainability story.

Goal #8 - Create target marketing to promote the consumption of NYS Milk and dairy products to Gen Z (10 to 23 years old).

Goal #9 - Develop and implement marketing strategies that are inclusive of the socially diverse population to increase the consumption of NYS milk and dairy products.

Budget: \$937,987

Program 1: Building Trust with Gen Z in Schools

Dairy Farm to School Outreach

Adopt a Cow:

- For the 2024-25 school year, more than 3,000 educators enrolled in the program (reaching over 106,000 students), a seven percent growth in registration from last

year. More than 1,000 classrooms participated in this year's live chats with a dairy farmer, reaching over 21,500 students. Survey results showed students' dairy knowledge grew by 82 percent.

S.T.E.M. (Science, Technology, Engineering, and Math):

- New England Dairy (NED) staff met with their state Departments of Education, Science Teacher Associations, and other partners to highlight the two Next Generation Science Standards (NGSS) badged units available for high schools to use, as well as additional classroom resources to use with middle and high school students. The NGSS Badge recognizes only resources that meet their quality standards as "High-Quality Educational" materials.

Program 2: Building Trust with Gen Z and Millennial Parents through Consumer Experiences and Media

- The New England Dairy Community Events Team attended 53 events throughout the region, including 13 events with dairy farmer participation. Our "Taste. Learn. Meet." initiative generated 248,000 impressions and 55,000 in-person engagements.
- New England Dairy accumulated 140 million earned media impressions in 2024. Publicity value totals over \$1.2 million.

Program 3: Building Trust with Gen Z and Millennial Parents Digitally

- Featuring topics based on key research insights that align with the needs and wants of important audiences, organic, and paid social media targeted people who don't regularly see NED's content. Overall social media engagement (Facebook, Instagram, TikTok, and YouTube) for 2024 was up 107 percent compared to 2023. Two viral recipe videos garnered a total of 14.9 million plays, 21,700 reactions, 11,700 shares, and 1,700 comments.
- NED's website received 210,000 page views in 2024, which was a 22 percent increase compared to 2023.

A comprehensive influencer approach included fitness experts and influential trendsetters to position dairy as a solution tailored to modern lifestyles.

- During the 2024 Summer Olympics, NED partnered with American Dairy Association Northeast (ADANE) to show the many sides of Elle St. Pierre, dairy farmer, Olympian, and mom. The videos received over 165,000 views and 16,200 engagements.
- A sports nutrition campaign engaged six New England Gen Z TikTok influencers to share messaging around dairy's role in energizing your day, refueling, and enjoyment, generating 2.3 million impressions and over

42,000 engagements. The cost per 1,000 impressions was \$3.13, significantly lower than the industry average of \$6.06.

Program 4: Building Trust with Thought Leaders through Continuing Education

- Two live webinars featuring an endocrinologist and a registered dietitian/professional chef covered the importance of dairy in maternal and infant health and included dairy in culturally inclusive nutrition recommendations. As a result of these webinars, dairy positivity of attendees increased from 77 to 83 percent and from 76 to 90 percent respectively. Additionally, 427 health professionals viewed recordings in NED's webinar library, resulting in a 93 percent positive perception of dairy.
- By placing speakers at professional conferences in the region, NED provided dairy nutrition education to 500 registered dietitians, 75 Women, Infant, and Children (WIC) nutritionists, and 40 pre-med and medical students at the Student National Medical Association, an organization that represents black medical students.
- Through dairy farm tours and sustainability workshops, NED reached nutrition, culinary, and sustainability college students and interns through New England. As a result of one farm tour, dairy positivity went from 57 to 83 percent.
- During 2024, NED provided continuing education to 225 school nutrition professionals through live and recorded webinars covering topics such as the importance of dairy for those who are lactose intolerant, keeping milk cold, and dairy's role in child development.

Program 5: Building Thought Leader Trust through Communications and Outreach

- Four installments of a child development email series featuring brain health, bone health, immunity, and growth and development reached 5,000 registered dietitians, 3,200 pediatricians, and 1,000 pediatric advanced practice registered nurses. The average open rate was 32 percent, and the average click-through rate was five percent, well above the industry standard of 1.4 percent for health professionals.
- Three issues of NED's thought leader science newsletter reached 1,000 health professionals, with an average 3.2 percent click-through rate, exceeding industry benchmarks.
- NED engaged with 40 food insecurity partners throughout 2024, sharing dairy nutrition resources and recipes. During National Nutrition Month, a collaboration with Greater Boston Food Bank, New England's largest food bank, featured NED dairy-based recipes.

Program 6: Building Trust through Dairy Farmers

Digital Dairy Ambassadors:

- Seventeen ambassadors created a total of 448 posts generating over 46,700 likes and more than 57,700 engagements (comments, video views, link clicks, and more).

Dairy Promotion Grant Program:

- This year, 26 Dairy Promotion Grants, totaling \$43,000, supported activities including open farm days, booths at fairs and field days, virtual farm tours, educational programs for schools, and more, reached over 70,000 consumers across our region.

Farmer Engagement and Communications:

- NED's Farmer Newsletter had a nine percent click rate, which is nearly four times the national average.
- Engaged dairy industry groups, including:
 - Vermont Dairy Producers Conference, which included several New York farmer presenters.
 - Vermont Breakfast on the Farm, held virtually and generating over 51,850 views.
- NED hosted two communication trainings and created digital toolkits to support farmer outreach efforts.
- NED placed 19 trade publication stories this year, generating over 846,400 impressions.
- NED engaged 59 farmers in 50 dairy promotion activities, such as consumer engagement events and social media videos. NED also worked with five farmers across our region to produce op-eds focusing on cow care and sustainability.

Area 2: Support increased dairy sales in schools and through retail.

Priority Areas Addressed:

Goal #1 - Increase the consumption of New York milk and dairy products by youth (lunches, breakfasts, and other offerings).

Goal #4 - Improve communication to dairy producers and dairy stakeholders to inform them how they can assist in improving the consumption of New York milk and dairy products by highlighting the sustainability story.

Goal #9 - Develop and implement marketing strategies that are inclusive of the socially diverse population to increase the consumption of NYS milk and dairy products.

Budget: \$351,321

Program 1: Equipment and Marketing Grants, Trainings, and Collaborations

- NED granted \$102,000 to 57 schools to support proven programs to increase dairy sales with school meals. Schools funded in 2024 are showing an eight percent increase in dairy sales.
- A Chill Out with Cold Milk contest for all K-12 schools engaged 130 school nutrition professionals.
- At NED’s annual School Nutrition Experts Forum, 31 attendees from the largest districts in the region discussed strategies to serve more dairy in schools.
- NED partnered with Massachusetts Department of Elementary and Secondary Education on the More Than a Meal Tour to showcase the value of school meals, promoting smoothies, cheese, and other dairy items.

Program 2: E-commerce and Industry Engagement

NED leveraged e-commerce campaigns through Instacart showcasing milk and yogurt smoothies, and holiday dips and cheese. A National Dairy Month partnership with American Dairy Association North East and Price Chopper resulted in:

- \$357,000 in sales, with a return on ad spend (ROAS) of \$79.33.
- An additional \$234,000 in sales, moving 34,700 incremental pounds of milk with an Instacart activation.

NEDPB’s Participation in National Program – Dairy Management Inc.

Priority Areas Addressed:

Goal #5 - Increase the sales and consumption of milk and dairy products produced in the United States and exported to other countries.

Goal #6 - Participate in national programs influencing increased consumption of milk and dairy products.

Budget: \$360,692

Please see Dairy Management Inc.’s section for a summary and breakdown of its initiatives and metrics.

Dairy Management, Inc. (DMI)

Budget: \$3,071,848 (ADANE - \$2,711,156 and NEDPB - \$360,692)

www.usdairy.com/about-us/dmi

The NYSDPO did not directly award DMI a contract for the 2023 year. However, given the amount of funds contributed to the national program, a summary of DMI's work has been submitted by ADANE and NEDPB.

Summary of Company: Dairy Management Inc. (DMI) represents and implements the national dairy checkoff program and works on behalf of America's dairy farmers, including New York dairy farmers, to grow sales and trust in dairy foods, dairy farmers, and the dairy community. The foundation of this work is the DMI-developed national Unified Marketing Plan implemented in partnership with a nationwide network of dairy promotion organizations – including American Dairy Association North East and New England Dairy – that aligns promotion strategies and activities focused on core priorities set by dairy farmers and approved by the farmer-driven boards of national, state, and regional promotion organizations.

Program #1: Sustainability: Demonstrate that dairy is an environmental solution – backed by science and proof.

- The Greener Cattle Initiative, a collaboration with partners across the value chain, has made available \$10 million to date for research representing a 10:1 return on investment on DMI farmer investment. Grants have been awarded for research on genomic selection for low emitting cows, to learn how energy that is lost as enteric methane could potentially be redirected as fuel for the animal, and research on new methane inhibitors.
- Integrated Dairy Anaerobic Digestion model was published in July, illustrating the potential for anaerobic digestion technology to reduce greenhouse gas emissions.
- Launched Dairy Soil and Water Regeneration website to improve ability to share learnings.
- An online resource hub, the Dairy Conservation Navigator, was created for farm advisors, stakeholders and conservation professionals, containing science-based information on sustainable farming practices and technologies.
- The Ruminant Farm Systems model as a part of FARM ES version 3 was launched at the end of October. It provides results broken down by farm print (feed, manure, enteric, and energy) and gas type, among other insights.
- \$28 million of new incremental investment from partners for pilot projects and research going to support programs that empower sustainability action.

Program #2: Innovation: Grow relevancy, excitement, and sales around dairy's claims, messages, and products.

- Partnered with leaders in foodservice, retail, and consumer packaged goods to launch marketing programs and 12 new products.

- Fluid Milk: Value-added volume grew 5.9 percent, lactose free and flavored volume grew 10.8 percent, alternatives declined 5.40 percent.
- Funded 16 new projects related to health and wellness, domestic, and export sales growth, snacking, and sustainable processing.
- Published five new papers in global nutrition and the consumer areas of immunity and heart health, and initiated nine new studies in growth and performance, childhood health, mental and emotional health, sleep, and heart health to prove new benefits of dairy foods.
- Delivered 44 scientific presentations and briefings to health care professionals and thought leaders, reaching over 150 scientists from various sectors and 100,000 physicians at Mayo Clinic.
- Mayo Clinic: Started three research projects in cardiovascular health. Initiated two projects in the key future health and wellness territories of personalized nutrition and gut microbiome.
- Three major investments occurring in New York in the dairy space are utilizing checkoff intelligence to help guide growth (Fairlife, Upstate Niagara, Cayuga).

Program #3: Reputation: Using digital marketing and media to grow dairy's positive share of voice in the most critical channels for youth and parents.

Delivered relevant, science-based content to target audiences, focusing on dairy's benefits to health and wellness and responsible production.

- Website: USDairy.com traffic logged 5.8 million pageviews (85 percent increase over 2023) and 4.3 million total users (95 percent increase over 2023). Top-performing content beat engagement benchmarks by an average of 15 percent. Answered questions through new search tools to reach new users through Gmail, YouTube, and more, while addressing perceived barriers such as lactose intolerance and animal care.
- Social and Earned Media: Featuring priority topics, including childhood development, protein, gut health, dairy's role in food security and ongoing progress within environmental sustainability. Facebook and Instagram ads drove 7,000 link clicks to USA Today and TIME, and 22 thousand link clicks to Good Housekeeping and Women's Health. TIME milk safety article generated more than 241,000 impressions and 3,800 link clicks.
- Engaged 14 influencers across multiple topic areas, including health and wellness, fitness, culinary, and parenting, resulting in 75 posts, securing 155 million impressions, 51 million video views and 1.2 million engagements (likes, comments, shares) over a 12-month period 2023 to 2024.

Program #4: Reputation: Work with high-impact partners to protect dairy's place in the diet and reach consumers.

- Showcased dairy's versatility and global appeal to an influential audience at Food Network's New York Food & Wine Festival, reaching more than 6,000 foodie consumers and influencers at the event and more than 7,000 impressions via influencer outreach. Social campaigns pre-and post-event generated over 3.6 million impressions, over 1.7 million engagements (likes, shares, comments), over 3 million video views.
- Shared the comprehensive body of scientific evidence on the critical contributions of dairy foods to the health and wellness of Americans for the Dietary Guidelines for Americans 2025 to 2030 planning cycle. Submitted 13 sets of public comments.
- Secured endorsement from National Medical Association (NMA), the nation's largest black physician organization, confirming dairy's role across the lifespan for Black Americans through publication of a six-paper journal supplement.
- Reached more than 1,000 NMA physicians at all NMA regional meetings and the annual NMA convention, promoting cultural relevance of dairy foods among Black Americans.
- NMA briefings with The White House, Congressional Black Caucus, and other agencies shared dairy science and the role of healthy eating patterns in addressing health disparities.

Program #5: Reputation: Continued establishing and expanding relationships with key health and wellness groups to broaden dairy's appeal and highlight dairy's role in advancing health for all Americans.

- Created a parenting hub on Mayo Clinic's website and promoted via partnership with Everyday Health, a leading consumer health information website, resulting in 12 million impressions and reaching close to 50,000 unique visitors.
- Two podcasts covered the role of iodine and starting solid foods, highlighting dairy's importance in the first 1,000 days of life, from conception to the second birthday.
- Mayo Clinic included dairy-specific module into their Culinary Medicine Course for Medical Students.
- Strategic partnership with Women, Infants and Children (WIC) reached 6.6 million WIC moms with information on the health benefits of dairy, especially in the first 1,000 days, including recipes and highlighting the cultural relevancy of dairy and lactose-free options.
- National Dairy Council was appointed to the National Academies of Science Roundtable on Obesity Solutions.

Program #6: Reputation: Advance support for U.S. dairy's environmental progress

- New York Climate Week 2024: Advanced dairy's environmental work, assessed future opportunities, and built relationships with key opinion leaders.
 - Hosted more than 15 members of the dairy value chain including processors, farmers, and business to collaborate on economically feasible solutions for reducing methane emissions.
 - Krysta Harden (President, US Dairy Export Council) and dairy farmers spoke on panels covering innovation and animal agriculture sustainability.
- Created "Dairy Diaries" video series starring Vanessa Bayer, in collaboration with MilkPEP, available on Roku and filmed at Beck Farms in New York. Viewers had a 23 percent increase in belief that dairy farming is environmentally friendly (pre-viewing vs. post), and three in five viewers said the series increased their respect for dairy farmers.
- Earth Day executions included an ad in The Economist, social media assets promoting animal care, cow manure as a renewable resource, and water recycling. LinkedIn and The Economist content garnered more than two million impressions and 1,500 clicks to USDairy.com.
- Leveraged successful "See Dairy Differently" and "A Farmer is More Than a Farmer" content during Earth Month, garnering 37 million impressions and 4,600 clicks to USDairy.com via six pieces of content.

Program #7: Exports: Positioning United States dairy as a consistent, preferred supplier in key global markets.

- Partnered with U.S foodservice companies to drive menu and marketing innovation using U.S. cheese. Launched (or relaunched) 10 products and a dozen successful promotions.
- Foodservice partnerships with #1 and #2 pizza brands continue to grow U.S. cheese volume in Japan, Taiwan, Indonesia and MENA (Middle East North Africa). Beginning in October, Pizza Hut Japan now uses 30% more cheese on all pizzas.
- The product research team, engaging with Dairy Research Center Network and the menu development team at Pizza Hut Japan, developed a U.S. gouda for testing in 40 key stores in this market, proving our international pizza partnerships benefit more than just U.S. mozzarella.
- To increase cheese utilization on individual pizzas, Domino's added a double cheese upsell platform, allowing customers to double the cheese on their pizza when ordering. They've also introduced a line of pizzas with 50% more cheese on every pizza in both Japan and Taiwan.

New York Agriculture in the Classroom (NYAITC)

www.agclassroom.org/ny

Contract amount: \$754,020

Summary of Company: Dairy in the Classroom (DITC) engages Pre-K to 12th grade students in hands-on learning experiences during the formal school day. County-based Cornell Cooperative Extension (CCE) educators build connections and relationships with teachers to teach or reinforce core academic content using dairy as the lens for learning.

Priority Areas Addressed:

Goal #1 - Increase the consumption of New York milk and dairy products by youth (lunches, breakfasts, and other offerings).

County Cornell Cooperative Extension (CCE) Dairy in the Classroom (DITC) Grants

Budget: \$494,000

Support was provided to 19 county CCE associations to provide direct classroom dairy education during the formal school day. County DITC educators completed 5,330 classroom visits and worked to build relationships with teachers and students, clearly communicate scheduling and lesson objectives, and develop hands-on lessons, tastings, and experiences.

Student learning took place in classrooms and outside the school walls. DITC educators regularly joined the classroom, facilitated outdoor events, and coordinated school field trips to farms. Lessons included student sampling of dairy products, and over 70,015 dairy samples were consumed.

Of significance, DITC educators were able to frequently visit classrooms. With academic concept reinforcement happening with each lesson and dairy experience, half of the impacted classrooms had between two and 14 visits.

Counties included in this program were: Albany, Broome, Cayuga, Erie, Franklin, Genesee, Herkimer, Kings, Livingston, Madison, Monroe, Nassau, New York, Oneida, Ontario, Queens, Richmond, St. Lawrence, Schenectady, Seneca, Steuben and Wyoming.

- 5,330 classroom visits
- 186,249 students reached
- 74,617 hours of dairy education
- 70,015 dairy samples consumed

Classroom Engagement

Budget: \$34,000

NYAITS provided curated lessons, kits, and programming materials for teaching dairy-focused core academic concepts, which were taught to 177,049 students. The lessons were standards-aligned and included topics such as exposure to dairy products, the environment, and the dairy economy. 72,745 dairy products were sampled or consumed during the lessons.

Ice Cream and Mac and Cheese Challenges

The ice cream and mac and cheese challenges were wildly successful. Students developed their own unique recipes, cooked the recipe, and created a unique marketing element to help sell their final product.

The contests are popular with teachers because they are strong cross-curricular projects, which include math concepts, research skill development, and science themes that connected and facilitated intergenerational conversations. 9,200 students participated in both contests.

Virtual and On-Farm Experiences

County programs continue to use virtual field trips as an important tool to showcase the dairy industry. Educators can use elements of a lesson on the farm or have someone in the industry explain their career. They can also access a host a bank of dairy virtual field trips. There were a total of six virtual field trips.

On-farm field trips have provided students their first opportunity to meet a farmer, see the lifecycle of a farm, and ask their own questions about milk production, nutrition, and the environment. The field trips varied in size – from very large open farm day experiences to very small visits for targeted or in-depth topic studies. A total of 32 field trips took place.

Professional Development for Educators

Budget: \$30,000

Professional development trainings continued in 2024, in partnership with the DITC counties. These sessions were held on farms where teachers experienced lessons, received classroom supply kits to teach the lessons in their classrooms, and were able to build connections with the farmers hosting the sessions. Most teacher participants had never been to a dairy farm in the past.

The goals of the trainings were to help the DITC counties build stronger engagement and connection with the teachers using their programs, and to create interest for new schools to participate in DITC. The trainings created confidence for teachers to use food, agriculture, and dairy even when the DITC educators are in their classroom.

One of the highlights for the teachers was learning how to make cheese and ice cream, and realizing how easy it is to make with their students. Every teacher received a cheese making or ice cream kit to use in their classroom, along with books and resources to support their efforts.

137 teachers from five areas participated in trainings:

- New York City – Dutch Hollow Farm
- Franklin County – PAPAS Dairy with Phoenix Feeds and Franklin County SWCD
- Ontario County – Hemdale Farms & Sweet Acres Creamery
- St. Lawrence County – Mapleview Dairy
- Erie County – Phillips Family Farm & Folts Farms

Dairy in the Classroom Educator Inservice

Budget: \$15,000

The DITC program is growing and evolving with 19 county programs and over 186,000 students being impacted. It has become increasingly important to build a community amongst the educators leading and implementing the project.

NYAITC hosted a multi-day professional learning in-service for all existing and new county programs. Hosted in Broome County, over 30 DITC educators came together to model lessons to one another, share best practices, lessons learned, and how they structure special programs with their schools. They shared classroom management best practices, favorite tools of the trade, and brought materials to give one another.

Guest speakers included Kate Preston (CCE Harvest NY's Farm to School Education Specialist) and Sam Torrey (Corning Place Communications). A highlight of the experience was going on a farm tour with Judi Whittaker of Whittaker Farms, where she shared stories of her farm's investment in caring for the environment. Educators were able to learn about the intense data collection and resource tracking that is required for dairy farms, and the very real economic impact it has on operations.

One of the goals of this action was to build the strength and capacity of each program by providing time and space to share, grow, and learn about implementation of school-based programming from one another. Every participant shared in their evaluation how valuable the time spent together modeling and learning new curricular connections for the new school year was during the in-service, and that they want more opportunities to connect, share, and grow together.

Milk For Health on the Niagara Frontier, Inc (MFH)

www.milkforhealth.org

Contract Awarded: \$660,000

Summary of Company: Incorporated in 1949, Milk for Health is one of the oldest dairy promotion organizations in the United States. Milk for Health consists of seven dairy farmer board members from across Western New York, a full-time employee, and several part-time employees. Since day one, the goal of the organization has been to support the dairy farmers of Western New York, promote dairy products, and educate consumers about the goodness of milk. In 2019, the organization reorganized and took a more modern direction in their programs. The new up-to-date strategy being implemented is much more relevant for the high-tech, fast-paced world of today.

Priority Areas Addressed:

Goal #1 - Increase the consumption of New York milk and dairy products by youth (lunches, breakfast, and other offerings).

Goal #3 - Proactively improve the image of dairy products and/or dairy producers' farming practices among consumers, thus improving the acceptance and consumption of New York milk and dairy products.

Goal #4 - Improve communication to dairy producers and dairy stakeholders to inform them how they can assist in improving the consumption of New York milk and dairy products by highlighting the sustainability story.

Goal #8 - Create target marketing to promote the consumption of NYS Milk and dairy products to Gen Z (ten to twenty-three years old).

Goal #9 - Develop and implement marketing strategies that are inclusive of the socially diverse population to increase the consumption of NYS milk and dairy products.

Streaming Advertising

Budget: \$150,000

Streaming or connected television has given MFH the biggest "bang for its buck" in terms of impressions. It gives MFH a much more precise look at how many consumers are viewing the ads. MFH can target specific demographics, document how many of these consumers view the entire ad, and how many people skip through. In 2024, they continued their partnership with Bone Cold TV, a Buffalo based hunting show that has a

national broadcast and streaming television audience. This show had helped them place ads on various platforms. They also were able to advertise on the Spectrum TV digital app, YouTube, and Hulu. MFH worked with Buffalo Advertising Management to secure a deal to stream on over 15 other digital channels and apps!

Goal Number of Impressions: 10 million

Actual: 9,750,457

Goal Number of Sites/platforms: 15

Actual: 31

Explore and More Children's Museum

Budget: \$125,000

MFH's partnership with Explore and More Children's Museum continued to flourish in 2024. Located on Canalside in downtown Buffalo, its location connects MFH to both museum attendees and the tourists visiting the area attractions.

Every year MFH adds more and more events to the calendar at the museum. 2024's schedule included:

- Spring Break Week
- Cows at Canalside
- Magician appearances with Rob Allen
- Cooking classes
- Taste testing
- Grown up Night of Play
- National Cookie Day
- Milk and Cookies with Santa
- Mother's Day
- St. Patrick's Day
- Earth Day
- Summer Camps
- Story Times
- Memorial Day
- Veterans Day
- National Farmers Day
- National Milk Day
- World Milk Day

Every time MFH partners with Explore and More for an event, MFH is featured on their website, social media, and sometimes their digital billboard along I-190. Activities during

these events have included making specialized milkshakes (ie: shamrock shakes), making butter, ice cream, and smoothies, making your own milk bath, creating other dairy confections, hands-on calf feedings. It is common to have a line waiting outside the kitchen gally to be able to participate.

Cows on Canalside is always a huge hit. Each month that MFH brought calves to the lawn outside the museum, more and more people came out specifically to meet a new bovine friend. MFH was featured on half a dozen Buffalo news stations several times throughout the summer. Rob Allen joined MFH for a fourth year at the museum performing pop up magic shows with his trivia wheel and fun magic tricks. The museum is continually asking for him to come and perform throughout the year.

This year, MFH also took the lead to create a new exhibit at the museum. Partnering with Upstate they will be creating a milk plant for children to learn about milk processing and especially about careers in dairy!

Goal Number of Events: 15

Actual: 20

Goal Number of Magic Shows: 10

Actual: 10

Goal Number of Cows on Canalside: 3

Actual: 3

Assemblies

Budget: \$35,000

2024 marked Rob Allen's 48th year performing dairy-based magic shows for MFH. He brought his fun and educational magic show to 69 schools in the Buffalo area. After over 45 years of performing, he and his wife, Carol, still bring rave reviews. Olcott Beach Carousel Park continues to be a bustling place.

Goal Schools: 60

Actual: 69

Goal Olcott Park Performances: 40

Actual:40

Buffalo City Schools

Budget \$70,000

MFH's partnership with the Buffalo Community Schools grew exponentially again in 2024. In 2024, it worked with over 25 schools throughout the city of Buffalo. The goal number of Buffalo City School events for 2024 was 120, doubling from the previous year. MFH finished the year with a total of 115 events, making close to 20,000 impressions. The goal was not reached due to major weather conditions in the Buffalo area causing cancellations.

Some highlights from the year include:

- Bringing calves to multiple schools that were not previously accessible thanks to MFH's new calf box.
- Focusing on recipes that are relevant to the community that they are working with and using readily available ingredients.
- Participating in wellness fairs to highlight the goodness of milk in a healthy diet.
- Making yogurt-based dips and dressings as part of the summer program and using the vegetables grown in the school's community garden to sample them.
- A farm to grocery store obstacle course (that used items found on a dairy farm, such as calf bottles to simulate milking, grain scoops for carrying, grain bags for a sack race, etc.)

New activities this year included virtual farm tours for elementary-aged kids, new recipes, compound butter, and expanding into home and careers classes to promote dairy. With the limited budget for the classes in the city (approx. \$5 per child for all cooking activities throughout the year), having dairy is often not a primary ingredient due to cost and shorter shelf life.

Goal Number of events: 120

Actual: 115

Cooking Classes

Budget: \$7,000

In 2024, MFH was able to teach over 1,600 students across western New York how to cook with dairy! MFH exceeded their goal and budget due to having so many requests and the manpower to facilitate. Students learned to cook loaded grilled cheese sandwiches, not so typical smoothies, and home-made macaroni and cheese. All the recipes offered a lactose-free option and students were taught about lactose intolerance and how to enjoy dairy despite it. Every school MFH attended requested them back for the 2025 year.

Goal Students: 1,500

Actual: 1,629

Web/Social Media

Budget: \$90,000

MFH's website and social media sites provide an opportunity for people who attend the organization's events and classes to follow up on stories, print recipes, find kid-friendly activities, and more. In the fall, MFH launched its updated website, which resolved many of the issues the old website had. Visitors can now print the recipes and activities with ease. Information can be easily translated so that non-English speaking visitors can understand and use the information and recipes. MFH will be adding a list of upcoming events to the events page. In 2023, MFH began working with Amplified Buffalo, an extension of the Buffalo News. Amplified Buffalo has managed MFH's paid social ads, built the new website, produced videos, including the Dig in Buffalo Series, and other branded content. Amplified blew MFH's goal of impressions out of the water! They used the ads that they created for social media across all their media and social platforms. MFH also began a partnership with the Buffalo Bandits Lacrosse team.

Goal of Impressions: Seven million

Actual: 18.5 million

Goal of new Recipes: 75

Actual:94

Goal of >One-minute videos: 50

Actual: 66

Goal of <One-minute videos: 200

Actual: 93

Goal Video Clicks: 60,000

Actual 150,824

Fairs and Public Events

Budget: \$50,000

Fairs and events were the highlight of MFH's year. The organization attended 22 events throughout 2024. The face-to-face interaction that MFH's staff, volunteers, and local dairy farmers have with consumers is irreplicable. The 2024 year included:

- The Attica Health and Wellness Fair where MFH had a yogurt bar
- Sponsoring and supplying the cheese table at the Attica Partners in Ag Dinner
- Dairy activities including smoothies, butter making at the YMCA Kids Days
- Wyoming County World Milk Day Celebration
- The photobooth milk carton was set up at two weddings
- The Buffalo Holiday Market
- The Cattaraugus County Fair, where they teamed up with Farm Bureau to bring a fun interactive tent, including dairy signage, daily make and take activities, Millie the milkable cow, and so many balloons!
- Wyoming County Fair, where they sponsored the Farm Olympics, ice cream eating contest, a few 4-H events, and had their mobile milk carton photo booth
- Erie County Fair
- Orleans County Fair
- Genesee County Fair
- Java T Ball- ice cream social
- Wyoming County Youth Ice Cream Social
- Wyoming County Health and Wellness Fair
- East Aurora Pot of Gold Cash Raffle
- Miscellaneous other events

MFH's mobile 10-foot-tall milk carton photo booth was used at many of these events and was also used at several weddings throughout the summer and fall. Other events included: WIC World Breast Feeding Day, speaking engagements at several schools, guest spots on radio shows.

Goal Number of Events: 10

Actual: 22

Goal number of Attendees: 1.5 million

Actual: 1.2 million

School Events

Budget: \$15,000

In 2024, MFH decided to make school events its own category. This year's events included:

- Painting activities with several elementary schools
- Story Hours
- Snow Ice Cream
- Career Days
- Hot Cocoa
- Pancake breakfasts
- After Prom Parties (sanctioned by the schools)
- Calf Encounters
- Stringcheese activities
- Kinderfarmin
- County Fair Days
- Field days

Goal events: 25

Actual: 27

Influencer

Budget: \$40,000

In 2024, MFH partnered with the undefeated Buffalo Bandits Lacrosse Team. Sponsorship included social media mentions and posts, the title sponsor of the Dane and Josh podcast/YouTube channel, signage throughout the games, announcements throughout the games, TV commercials, website spots, activations before and during the games, and player appearances.

Goal Impressions: One million

Achieved: 2 million

New York Animal Agriculture Coalition (NYAAC)

www.nyanimalag.org

Contract Awarded: \$800,000

Summary of Company: The New York Animal Agriculture Coalition is a collaborative group of advocates that builds trust between farmers and their community members. This not-

for-profit organization showcases modern agricultural practices in an ever-changing industry by empowering and encouraging farmers to share their agricultural stories. To sustain the future of animal agriculture, NYAAC utilizes its diverse passions to amplify the voices of New York State farmers. With a dynamic staff, farmer directors, and industry professionals, this team effectively networks and builds relationships to raise funds and support for programs that align with the NYAAC mission.

Priority Areas Addressed:

Goal #3 - Proactively improve the image of dairy products and/or dairy producers' farming practices among consumers, thus improving the acceptance and consumption of New York milk and dairy products.

Dairy Cow Birthing Center

Budget: \$100,000

For more than a decade, the Dairy Cow Birthing Center (DCBC) has provided hundreds of thousands of visitors, in person and from afar, the ability to witness the birth of a calf. More importantly, this experience continues to provide the opportunity to connect with farmers and industry volunteers in an intimate environment. Volunteers provided accurate information about dairy animals and dairy products and answered countless questions day after day about the dairy industry and life on a farm. In 2024, the DCBC organically reached more than 200,000 people on social media while garnering more than 22,000 watch hours on the YouTube livestream. In person, more than 2,500 dairy products were sold and enjoyed. New this year, was the scheduled programming in the tent that welcomed nearly 1,000 people of a variety of ages. These participants made ice cream, learned about milk components, and made their own total mixed ration mix. Also new this year, was the Aspiring Veterinarians program, which welcomed 10 students who were motivated and inspired by volunteer veterinarians at the Birthing Center. These students were given the opportunity to ask questions of a practicing veterinarian and become inspired to continue their path in animal science.

Priority Areas Addressed:

Goal #3 - Proactively improve the image of dairy products and / or dairy producers' farming practices among consumers, thus improving the acceptance and consumption of New York milk and dairy products.

Goal #9 - Develop and implement marketing strategies that are inclusive of the socially diverse population to increase the consumption of NYS milk and dairy products.

Mobile Dairy Experience

Budget: \$700,000

After much anticipation, the Mobile Dairy Experience (MDE) arrived! The 53 foot tractor trailer, which expands into 1,000 square feet of exhibit space, made its debut at the 2024 New York State Fair. The launch garnered more than 50 news stories in the media reaching more than 109,000 on the TV audience at a value of \$23,000. In addition to television, news stories hit the radio waves and online/print audiences reaching more than 77,000 and one million people, respectively. During the five events held in the fall of 2024, social media reached more than 140,000 people while in person events welcomed 21,000 visitors to the MDE. Events would not have been successful without the more than 30 different farmer volunteers whose time and talent was utilized to visit with tens of thousands of visitors to help them better understand and appreciate the New York dairy industry. The MDE showcases engaging components throughout the trailer focused on every piece of the puzzle, from the farm to the grocery store. Eye-catching imagery, interactive games, videos, and more allow people of all ages and learning styles to gather information about New York dairy farmers, dairy farming, and dairy products. The MDE will be on the road full-time, beginning in March 2025.

Burt Media Group LLC (BMG)

www.burtmedia.co

Contract Awarded: \$200,000

Summary of Company: Burt Media Group is a creative media company that helps individuals and brands develop an impactful presence online through social-first digital strategies. They specialize in content strategy, content creation, social media management, and paid advertising.

Priority Areas Addressed

Goal #3 - Proactively improve the image of dairy products and / or dairy producers' farming practices among consumers, thus improving the acceptance and consumption of New York milk and dairy products.

Goal #4 - Improve communication to dairy producers and dairy stakeholders to inform them how they can assist in improving the consumption of New York milk and dairy products by highlighting the

sustainability story.

Goal #8 - Create target marketing to promote the consumption of NYS Milk and dairy products to Gen Z (10 to 23 years old).

Goal #9 - Develop and implement marketing strategies that are inclusive of the socially diverse population to increase the consumption of NYS milk and dairy products.

New York Dairy Media Brand Management

Budget: \$100,000

In 2024, BMG continued to grow the New York Dairy brand pages digital presence, using high-quality content, storytelling, and social media engagement to connect with consumers.

Throughout the year, the brand produced a wide variety of social content, including 397 pieces of partner content featuring 50 unique farmers and industry partners. Additionally, 50 blogs were published.

The brand maintained an aggressive posting schedule, totaling 2,028 posts across TikTok, Instagram, Facebook, and YouTube, ensuring a constant flow of fresh content. These efforts resulted in 7.2 million impressions, reaching 2.5 million people, and generating 3.9 million video views. Engagement remained strong, with 168,550 interactions across platforms. Social media growth was substantial across the profiles; TikTok followers increased by 6,203 with a total of 30,960 followers; Instagram grew by 366 followers, totaling 6,655 followers; YouTube gained 1,900 new subscribers, totaling 6,820; and Facebook earned 3,176 new fans, totaling 5,801.

These numbers reflect a growing and engaged audience that is actively interacting and sharing New York dairy content.

The newyorkdairy.com website benefitted from consistent updates and blog content as well. The site now ranks for over 300 keywords and is a top 20 search result for 100 keywords.

Priority Areas Addressed:

Goal #1 - Increase the consumption of New York milk and dairy products by youth (lunches, breakfasts, and other offerings)

Goal #2 - Promoting uniqueness of, and increased sales of, New York milk,

dairy products and / or ingredients throughout the entire food supply chain through various distribution channels and partnerships, including but not limited to, e-commerce, curb side sales, etc.

Paid Media Campaign (Instacart, Meta, Google)

Budget: \$50,000

In 2024, BMG allocated \$50,000 toward ad spend, driving strong performance across social media and Instacart. The campaign generated 5,030,851 impressions, reaching 1.8 million unique users, and leading to 4.3 million video views. Engagement was exceptionally high, with 2,008,777 interactions (likes, comments, shares), resulting in an impressive engagement rate of 39%.

Ad efficiency remained strong, with a cost per engagement (CPE) of \$0.01 on Instagram and Facebook and \$0.05 on TikTok, while video plays cost just \$0.01 per view on Instagram/Facebook and \$0.02 per view on TikTok. Click-through performance was also notable, generating 49,022 link clicks, with a cost per click (CPC) of \$0.54 on Instagram/Facebook.

Instacart advertising was strong, with attributed sales totaling \$301,314 and a combined return-on-ad-spend (ROAS) of \$15.07. This demonstrates that every dollar spent on Instacart ads returned over \$15 in sales, making it an effective investment.

The performance of New York Dairy's digital advertising in 2024 highlights efficient budget use, strong audience engagement, and impactful consumer reach, reinforcing the effectiveness of targeted content in driving awareness, interaction, and direct sales.

Priority Areas Addressed:

Goal #3 - Proactively improve the image of dairy products and / or dairy producers' farming practices among consumers, thus improving the acceptance and consumption of New York milk and dairy products.

Goal #4 - Improve communication to dairy producers and dairy stakeholders to inform them how they can assist in improving the consumption of New York milk and dairy products by highlighting the sustainability story.

Goal #8 - Create target marketing to promote the consumption of NYS Milk and dairy products to Gen Z (10 to 23 years old).

Goal #9 - Develop and implement marketing strategies that are inclusive of the socially diverse population to increase the consumption of NYS milk and dairy products.

Creative Development

Budget: \$50,000

In 2024, BMG invested \$50,000 into New York Dairy's content creation. This investment fueled the production of 11 creative "I Am New York Dairy" campaign videos (plus, 110 supplementary short form and compilation videos using the footage), expanding the brand's storytelling while reinforcing the variety of roles, organizations, and individuals that make New York dairy what it is.

A significant focus was placed on supporting local farmers and industry partners, resulting in 397 pieces of dedicated content that highlighted their work, commitment, and contributions. This partner-driven content provided a personal and authentic connection to consumers, helping to build trust and transparency.

Consistency remained a priority, with over 2,000 total posts published across TikTok, Instagram, Facebook, and YouTube, ensuring a steady and engaging presence across all platforms. By maintaining consistent daily postings, the brand was able to sustain audience engagement, grow its digital footprint, and reinforce key dairy messages.

Additionally, 50 blogs were developed to provide in-depth insights into farms, announcements, resources, individuals, festivals, and more. These articles served as a valuable resource for consumers looking to learn more about New York dairy.

This investment in content development and brand storytelling has strengthened New York Dairy's digital presence, promoting deeper connections between consumers and the state's dairy industry.

Corning Place Communications (CPC)

www.corningplace.com

Contract Awarded: \$200,000

Summary of Company: Corning Place Communications (CPC) is a full-service, award-winning strategic communications firm based in Albany, New York, with over two decades of experience developing and launching comprehensive communications campaigns, building awareness for our partners, and fostering relationships to help meet the goals of our partners. By combining creativity with expertise in media relations, content creation and design, videography, social media, and more, they craft campaigns that reach the right audience and achieve meaningful results.

Priority Areas Addressed:

Goal #3 - *Proactively improve the image of dairy products and/or dairy producers' farming practices among consumers, thus improving the acceptance and consumption of New York milk and dairy products.*

dairy4good: Campaign Coordination, Outreach, Management, and Implementation

Budget: \$59,000

CPC's goal is to ensure consumers and businesses are informed of the science-based environmental stewardship practices implemented on New York's family dairy farms and at every step of the farm-to-table process. This project included the development and launch of the dairy4good brand, the creation and implementation of social media platforms and content, the development and launch of an interactive website [dairy4good.com], and the coordination of video and photo shoots.

Results

- dairy4good brand, logo, and concept developed and launched.
- Interactive dairy4good website went live in June.
- Facebook, Instagram, YouTube, and Twitter accounts created and launched in June 2024.
- 14 total original videos and reels shared on social media.
- 192 total posts across all platforms in six months, including 24 collaboration posts on Instagram with other dairy-focused organizations in New York State, including NY Animal Agriculture Coalition, New York Dairy, The Great NYS Fair, and American Dairy Association North East.

dairy4good Video Series

Budget: \$51,000

This video project aimed to provide an accurate image and perception of the science-based conservation efforts and best management practices dairy producers implement as good environmental stewards and neighbors. By focusing on multiple aspects of the chain of dairy production, they highlighted the entire ecosystem of sustainable dairy farming from nutrient management in the fields to the finished dairy product found on store shelves. Interviews took place across the state with:

- A Farmer
- Employee
- Local Soil and Water Conservation District expert
- Cornell researchers
- CAFO planner expert
- Certified nutrient manager
- Milk hauler

- Processor

Results

Goal: Eight short-form videos and one long-form video.

Actual: Nine short-form videos and one long-form video.

Paid Digital Campaign: Educate Consumers Across New York State

Budget: \$37,000

CPC's digital ad campaign for dairy4good focused on both engagement and growth to ensure their message was getting in front of the targeted audiences. They utilized the @dairy4good content on all four social media platforms, and pitched ideas for collaboration posts with other state industry organizations to further its reach and impact.

Results

The campaign in total generated 6,555,460 impressions and received 1,942,381 engagements across all platforms (Facebook, Instagram, Twitter, and YouTube). dairy4good also gained 3,025,639 total video views.

Facebook and Instagram efforts resulted in a cost per video view (CPV) of \$0.02 and cost per engagement (CPE) of \$0.01. The campaign saw the same CPV and CPE on Twitter, over the same period of time.

On YouTube, the cost per video view (CPV) was \$0.03 and the cost per engagement (CPE) was \$0.02.

Our total following across all platforms reached 3,205 followers in just six months.

Goal #4 - Improve communication with dairy producers and dairy stakeholders to inform them how they can assist in improving the consumption of New York milk and dairy products by highlighting the sustainability story.

New York Dairy Toolbox

Budget: \$53,000

The Toolbox was created as a one-stop-shop for resources on the data-driven environmental stewardship practices taking place on New York's family dairy farms. This

included the development and creation of a brand, logo, and website. Also, the research, design, and development of the Toolbox's resources. It also included outreach to industry organizations for partnership to disseminate the Toolbox.

Results

Goal:

- Brand and website
- Videos from dairy4good
- Five infographics
- Three factsheets
- Five social graphics
- Sample social media messaging

Actual:

- Brand and website
- Videos from dairy4good
- Four factsheets (*one pending approval*)
- Two infographics (*one pending approval*)
- Six social graphics
- Sample social media messaging

Additional Results:

- CPC presented the New York Dairy Toolbox at a New York Ag in the Classroom conference in Binghamton on October 1. Approximately 40 educators were in attendance.
- CPC received confirmations from partners who have committed to assisting with disseminating resources to their members:
 - Northeast Dairy Producers Association
 - New York Animal Agriculture Coalition
 - New York Farm Bureau
 - Northeast Agribusiness and Feed Alliance
 - New York Ag in the Classroom
 - Cornell PRO-Dairy
 - Future Farmers of America
 - 4H New York
 - New York Agricultural Education Outreach

The Directions Group (formerly Aimpoint Research)

<https://www.directionsgroup.com/>

Contract Awarded: \$150,000

Summary of Company: As a strategic insights firm, our mission is to empower clients to gain a competitive advantage through dynamic, human-centric insights. Our dedicated agri-food team brings decades of industry experience to the table, offering a range of services that will help agribusinesses adapt to a rapidly evolving global landscape and stay ahead of the competition.

Priority Goals Addressed:

Goal #10 - Develop a research study identifying opportunities and challenges to the vitality of the dairy industry that can be used to educate consumers ensuring the growth of dairy processing in New York state.

Exploring New York Dairy Processing and Sustainability

Budget: \$150,000

The Directions Group's WatchDesk analysts compiled intelligence establishing current practices and future trends related to sustainability in the dairy industry and processing facilities.

The Directions Group analysts and Chief Economist conducted high level economic analysis of the New York dairy industry to identify challenges and opportunities. Additionally, The Directions Group examined sustainable energy practices and potential impacts to processors, producers, and consumers. The economic analysis assessed how New York specific initiatives, related to sustainability, positively or negatively impact New York dairy's competitiveness (regionally and globally).

The Directions Group conducted nine, 45-minute in-depth interviews with dairy processing plant supervisors and executives to obtain insights around current dairy processing practices, challenges, and opportunities. Participants also provided feedback on potential sustainable energy practices identified from the secondary research analysis, and their impact on the operation.

Wahl Media

www.wahlmedia.com

Contract Awarded: \$144,000

Wahl Media is a national media buying and planning company that specializes in crafting customized media strategies for businesses of all sizes, from local entrepreneurs to Fortune 500 corporations, focusing on television, radio, out-of-home advertising, and digital media across the country, with a reputation for expert negotiation and innovative ideas to secure the best rates and added value for clients.

Priority Goals Addressed

Goal #3 - Proactively improve the image of dairy products and/or dairy producers' farming practices among consumers, thus improving the acceptance and consumption of New York milk and dairy products.

Retail Media Network Partnership with Kinney Drugs

Budget: \$144,000

Wahl Media spearheaded the marketing and promotion of dairy products available at Kinney Drugstores, effectively connecting with over 300,000 pharmacy loyalty customers through health-focused messaging. This initiative extended audience reach across Central New York, Northern New York, and Vermont while aligning dairy product messaging with "Love Local" shelving units in New York and Vermont. The campaign successfully drove dairy sales in Kinney Drugstores.

In collaboration with the Kinney creative team, Wahl Media assisted in the development and launch of Rosemary the Dairy Fairy, the campaign's mascot, who debuted in April 2024 and was prominently featured across all marketing assets.

Over the course of the year, Wahl Media delivered remarkable results, including:

- Eight million display impressions
- 5.3 million social media impressions
- 7.2 million in-store TV impressions
- Over 500,000 in-store radio impressions

This comprehensive campaign significantly enhanced the visibility and promotion of dairy products within Kinney Drugstores.

Dairy Runway Program

<https://dairyinnovation.org/dairy-runway-program/>

Contract Awarded: \$278,420

Note: CREA received a No Cost Extension for this 2023 grant, extending program activities and funding through June 2025.

Summary of Company: Cornell's Center for Regional Economic Advancement launched the Dairy Runway entrepreneurship program in 2023 for food innovators with early-stage ideas for value-added dairy products. The program provides participants with the knowledge and skillset required to launch a product that responds to consumers' needs. The program is organized into two phases: 1) an online, synchronous entrepreneurship course focused on the customer discovery process that introduces tools like the Business Model Canvas; 2) the Kitchen Incubator phase of the program, for participants who complete the entrepreneurship course, to test the technical feasibility of their proposed product and work toward a business model with a paired Cornell Entrepreneur in Residence, who provides ~6 hours of one-on-one coaching.

Priority Goals Addressed

Goal #2 - Promoting uniqueness of, and increased sales of, New York milk, dairy products and/or ingredients throughout the entire food supply chain through various distribution channels and partnerships, including but not limited to, e-commerce, curbside sales, etc.

Budget: \$278,420

CREA has committed to supporting two cohorts per grant period, with no more than 10 participants per cohort.

Cohort 1

Six out of 10 program participants from the inaugural cohort advanced into the Kitchen Incubator phase of the program in fall of 2023 and concluded prototyping training in winter of 2024. During this phase, participants were paired with a Cornell Entrepreneur in Residence who served as a business coach. Participants met with coaches on a weekly basis to further develop the business model canvas started during the entrepreneurship course, focusing on learnings from the prototyping and additional customer discovery interviewing. Out of six teams, three concluded their prototyping training in 2023 and the remaining three continued prototyping work through early 2024 to allow for formula adjustments between test runs. All six teams completed the program in 2024 and received a letter of completion from the program manager. Program manager conducted one-on-one feedback sessions with individual participants.

Cohort 2

The six-week application period for the second cohort closed in January 2024, resulting in 23 applications. Seven teams participated in the online entrepreneurship course that ran from end of January through February. Course content for the second cohort was

updated to reflect feedback from previous participants. Five guest speakers, also referred to as industry experts, were confirmed to discuss brand marketing, industry trends, and the entrepreneurial journey; speakers included representatives from: Agency 29, Wegmans, Dairy Management Inc., Antithesis Food, and lu.lu ice cream.

Five out of seven program participants advanced into the Kitchen Incubator phase of the program in summer of 2024. To better determine prototyping needs of participants' products, program staff co-developed with Cornell's Food Processing and Development Lab (FPDL) team a "prep" form for participants complete prior to prototyping training activities. This enabled Cornell's food technicians and dairy specialists to better tailor support for product development. Participants were matched with individual business coaches who provided guidance on business model canvas development. As an additional delivery for this phase of work, teams were required to create pitch decks for their products with assistance from their coaches. Pitch decks were presented during virtual "pitch sessions" conducted with course instructors, all cohort participants and coaches. Several teams will continue prototyping training through spring of 2025 due to additional time needed in the FPDL, sourcing challenges, and/or more time needed between test runs.

Additional metrics include:

- 51 total applications received
- 20 total applicants accepted
- 17 total participants
- Six Cornell Entrepreneurs in Residence recruited as business coaches
- 3,172 total social media impressions
- Six informational webinars hosted
- Four onboarding sessions hosted

Contract Awarded: \$225,000

Note: CREA received a No Cost Extension for this 2024 grant, extending program activities and funding through December 2025.

Budget: \$225,000

This grant provides funding to continue the Dairy Runway program, supporting two additional cohorts with no more than 10 participants (or teams) per cohort.

Cohort 3

For the program's third cohort, a recruitment campaign launched in April 2024 and concluded six weeks later, resulting in 28 applications. Eight applicants were accepted into the program, which began in early July, starting with the entrepreneurship course that concluded in August. Industry leaders representing marketing firms, major grocery chains, like Wegmans, and national dairy organizations, such as Dairy Management Inc., participated as guest speakers throughout the course. Course content was updated and expanded to include a class on working with co-packers and distributors. Additional content on regulatory requirements for dairy products was developed and integrated with the course's canvas content. In addition, program staff created an online Dairy Resource folder with information on industry-related organizations, as well as Cornell programs, and other resources available to food innovators interested in launching and scaling businesses in the Northeast.

Seven program participants advanced into the Kitchen Incubator phase, which began in September and will continue through 2025. Each participant was paired with a Cornell Entrepreneur in Residence who served as an individual business coach. Participants meet with coaches for up to six hours to further develop the business model canvas started during the entrepreneurship course and create a pitch deck to be presented at a virtual pitch session with the entire cohort, instructors, and business coaches. All participants are now given access to Cornell's online library system that includes business resources, such as PitchBook. During this phase, participants work with Cornell's FPD team and depending on the product needs, the Seneca Foods Foundation pilot plant, to test the formulation of their product and work toward a prototype. Each participant has up to two full days to collaborate with Cornell's food technicians and dairy specialists. Two teams from this cohort have completed the program to date. The remaining teams are continuing their prototyping training through 2025.

Cohort 4

Recruitment for the third cohort began in mid-November of 2024 and concluded in early January 2025, resulting in 26 applications. Work with this next cohort begins late January 2025.

Additional metrics include:

- 28 total applications received (this does not include applications received for cohort 4)
- Eight total applicants accepted
- Eight total participants
- Six business coaches recruited: 4 Cornell Entrepreneurs in Residence and 2 Cornell affiliated food innovators with business development experience

- 1,157 total social media impressions
- Six informational webinars hosted
- Two onboarding sessions

Cornell University Research Projects

<https://cals.cornell.edu/food-safety-laboratory>

Milk Quality Improvement Program (MQIP)

Contract Awarded: \$895,630.00

Summary of Company: The MQIP is the core overall dairy foods program at Cornell, providing research and extension support for raw and finished product quality improvements and product safety in New York. The MQIP provides broad expertise in dairy microbiology, including microbial food safety and spoilage, along with key expertise in training New York dairy manufacturers, playing a critical role in ensuring that New York has a qualified dairy processing workforce. This program is the only one of its kind in the United States committed to serving the New York dairy industry to ensure a plentiful supply of high-quality dairy products to consumers in New York and beyond.

Priority Areas Addressed:

Goal #7 - Conduct research projects that create new products and / or enhance the safety, quality, and sensory attributes to expand the demand for New York dairy products and dairy ingredients.

Dairy Product Quality and Safety Program (DPQSP; MQIP "core" program)

Budget: \$450,170

The Milk Quality Improvement Program (MQIP) provides comprehensive support to the New York dairy industry throughout the farm-to-processing continuum. On behalf of the New York dairy farmers, who have continuously supported this program since 1979 through check-off dollars, the MQIP prioritizes program activities and outcomes that facilitate the long-term success of the New York dairy industry.

Key metrics for 2024 include:

- 10 peer-reviewed publications and three lay articles published
- submitted four requests for additional funding from non-NYSDPO sources and

- nearly \$800,000 in leveraged funding
- conducted 39 dairy foods training courses, reaching 1,161 individuals with 15,398 contact hours
- collected over \$530,000 in fees from workshops and from processor support through the food processing development laboratory
- supported New York processors and producers through nine deployments of the MQIP rapid response team.

In 2024, their interactions with the New York dairy processing industry reached businesses that process ~93 percent of the milk in New York, demonstrating the reach of our program and an overall high level of stakeholder impact.

Supplemental Project – New York State Raw Milk Quality: Benchmarking to facilitate continuous improvement and consumer acceptance

Budget: \$114,460

High-quality raw milk is essential to the manufacture of high-quality processed dairy products, but contemporary research indicates that tests that are currently performed on raw milk, such as somatic cell count and total bacteria count, do not comprehensively capture the factors that impact the finished product quality. For this project, researchers are evaluating raw milk for traditional and novel measures of quality to produce data that will establish New York benchmarks for parameters that directly affect finished product quality and identify farm characteristics and management practices that lead to desired raw milk quality specifications. In 2024, they completed raw milk sampling, tested a total of 593 samples from 100 farms. They have run a total of 13,736 tests, consisting of 5,015 microbial tests, 8,128 chemical tests, and 592 sensory tests. Preliminary findings suggest that while the overall quality of New York raw milk is exceptional, there are opportunities for improvement, especially in the novel parameters that directly affect finished product quality (e.g., sensory). Evaluating the raw milk parameters that directly impact processed dairy products is critical to the long-term success of the New York dairy industry.

Supplemental Project – Detection, identification, and tracking of thermotolerant and non-starter lactic acid bacteria throughout the dairy value chain

Budget: \$103,840

Thermotolerant bacteria can survive moderate to severe heat treatments and non-starter lactic acid bacteria (NSLAB) are unintentional contaminants in cultured dairy. The defects caused by these organisms may cause unwanted gas production or off-flavors. In 2024, our efforts focused on i) evaluation of the modified laboratory pasteurization count (mLPC) method developed as part of this project in 2023, ii) evaluation of key non-starter lactic acid bacteria found in raw milk and pasteurized dairy products, and

iii) characterization of over 1,400 bacterial isolates for use as a primary database for tracking contamination with thermotolerant and non-starter lactic acid bacteria. Their results show that the mLPC method was successful at selecting for thermotolerant bacteria in the dairy system that are of relevance to dairy product quality including *Microbacterium*, *Kocuria*, *Streptococcus*, and others. Of the non-starter lactic acid bacteria isolated from raw milk, they identified 55 *Leuconostoc*, 48 *Weissella*, 20 *Limosilactobacillus*, eight *Lactococcus*, four *Lactocaseibacillus*, two *Streptococcus*, and one each of *Aerobococcus*, *Lentilactobacillus*, and *Pediococcus*. Of these isolates there were a total of 30 sequence types, allowing for differentiation between strains of the same genus, and ultimately allowing them to use this approach to track contaminants within dairy systems.

Supplemental Project – Targeted tracking of contamination in school milk fillers

Budget: \$36,000

In 2024, members of the MQIP visited two facilities manufacturing school milk in paperboard cartons and collected all wearable components replaced during the sanitary preventive maintenance of the N-8 filler, in total 336 components, 320 single serve milk cartons, 22 pre-filler milk samples, and seven equipment swabs were collected. These samples were then tested for the presence of total aerobic bacteria and Gram-negative spoilage bacteria. Additionally, 80 cartons from before and after the PM were also collected, stored for two weeks at 4°C, and tested for the presence of Gram-negative bacteria. Swabs were also used to capture potential biofilm residue in areas of the N-8 filler with obvious residual soil and areas deemed difficult to clean. The two facilities reported very different preventative maintenance and sanitation practices during the visits. For example, in one facility, contrary to industry best practices, no cleaning and sanitation was conducted after the last milk run and before the sanitary preventative maintenance was conducted leading to widespread contamination of replaceable components. These visits highlighted the lack of standardization in practices between facilities and the importance of increased training regarding best practices for dairy workers.

Supplemental Project – Modeling pasteurization survival of raw milk contaminants to assess value of raw milk premiums

Budget: \$108,560

In 2024, teams' efforts included modeling the bacterial community in raw milk bulk tanks, their survival of high temperature short time (HTST) pasteurization, and subsequent growth under storage conditions using a Monte Carlo simulation. The team used the following inputs and parameters for the model development i) Bacterial communities in raw milk generated by creating a list of the 20 most common and/or relevant bacterial genera in raw milk and estimated their relative abundance within the

raw milk bulk tank community from literature data and expert elicitation, ii) Estimated log reduction parameters during HTST pasteurization of each genus through the elicitation of three experts, and iii) Dynamic growth of the surviving cells from each genus in each simulated milk container under milk storage conditions using growth parameters obtained in previous growth experiments. This work will quantify the value of the microbiological quality of raw milk and provide insight into which bacterial groups should be targeted by farm sanitation practices as well as potentially be considered when determining raw milk quality premiums.

Supplemental Project – Water and aerosols as a source and transmission pathway for microbial contamination at the farm and in the processing facility

Budget: \$82,600

In 2024, 50 New York dairy farms were recruited and sampled as part of MQIP's evaluation of water as a source of contamination on dairy farms and in processing facilities. At each farm, both "inlet" and "hose" samples were collected. Inlet samples were located as close as possible to the water source's entry point into the milking parlor, and hose samples were located at important points-of-use, primarily at a hose located within the milking parlor. Each sample was tested for multiple microbial and physicochemical parameters, including Total Coliform Count, Aerobic Spore Count, Heterotrophic Plate Count, Total Gram-Negative Count, pH, Nitrates, and similar characteristics.

Additionally, samples were tested for *Listeria* species. Across all microbial parameters, municipal water at inlet sources had lower microbial contamination but, at the point of use, it was comparable to other sources. The team have further recruited 11 dairy processing facilities representing cheese, fluid, ice cream, cultured dairy, and powder manufacturers, and have completed five sample collections in 2024. MQIP's findings at both the farm and processor level will help provide further guidance regarding water parameters that are associated with microbial count. Ultimately, this research will provide both processors and dairy farms with recommendations that can improve product quality.

Northeast Dairy Foods Research Center (NDFRC)

<https://cals.cornell.edu/northeast-dairy-foods-research-center>

Contract Awarded: \$820,930

Summary of Company: The NDFRC works in collaboration with dairy farmers, industry, government agencies, and University partners to pursue cooperative dairy foods research and extension. Its mission is to seed dairy innovation and entrepreneurship; enhance the

quality, safety, and demand of dairy foods; and improve the sustainability of the dairy industry. The NDFRC is located at Cornell University in Ithaca, New York. It was established in conjunction with Dairy Management, Inc. (DMI) in 1988 as one of six national dairy centers. The NDFRC and its accomplishments over the past decades would not have been possible without the support of New York dairy farmers.

Priority Goals Addressed:

Goal #7 - Conduct research projects that create new products and/or enhance the safety quality, and sensory attributes to expand the demand for New York dairy products and dairy ingredients.

Project 1 – PI-David Barbano

Dairy Processing and Chemical - analysis transfer of technology for the NEDFRC-continuing project

Budget: \$59,708

The NDFRC has met with Byrne Dairy and ADANE about shelf stable milk in school lunch, and Fairlife, H.P. Hood, and Upstate OATKA to discuss the challenges with shelf stable milk and high-protein, milk-based beverages. Age gelation is an important quality limitation. They have determined that their gelled aseptic products have very little evidence of proteolysis, yet they form gels. Day-to-day and within day variation in age gelation during storage was caused by variations in temperatures and pressures before the holding tube in the ultra-high temperature (UHT) system. They are working with them to control age gelation.

Milk composition in the Northeast is changing. Fat test is increasing more rapidly than protein test, and this creates aged Cheddar cheese quality problems. NDFRC are working with cheese makers who utilize skim milk ultra-filtered (UF) concentrates to balance protein/casein to fat ratio for milk used in aged Cheddar cheese making. The team's presentation at the New York State Cheese Manufacturers conference has gotten nationwide attention and questions from cheese makers on how to control this. They have helped develop processing approaches to control of protein to fat ratio with AgriMark and Great Lakes Cheese.

They are working with HP Hood in all their plants in New York State. The goal is to improve the process control and milk component accountability for extended shelf life (ESL) and shelf-stable fluid milk product composition. They are working with them on process development of calibration samples to achieve this. On-site visits have been made to the plants in Batavia, New York; Oneida, New York; Vernon, New York; and Agawam, Massachusetts.

Project 2 – PI – Samuel Alcaine

Technology transfer for the NDFRC

Budget: \$11,800

The goal of this project is to facilitate directed engagement and outreach with the New York dairy industry to drive technology transfer and implementation based NDFRC research, with a focus on technologies that improve the sustainability, innovation, and entrepreneurship of the New York dairy industry. This year, the NDFRC participated in both the New York State Cheese Manufacturers Conference and Northeast Dairy Foods Association meetings, held the annual Northeast Dairy Foods Research Center Meeting with 78 participants and 21 dairy companies/organizations. The NDFRC was also able to provide timely Highly Pathogenic Avian Influenza (H5N1) educational outreach on H5N1 in milk and secured over \$1.2 million funding from state and federal agencies for research.

Project 3 – PI – Julie Goddard and Robin Dando

Rare sugar-sweetened yogurt - a novel process for better tasting, healthy, and natural dairy-derived sweeteners

Budget: \$105,152

Methods were developed to produce healthy, natural, low-calorie rare sugars like tagatose, allulose, and sorbose from lactose. Two key enzymes necessary for the conversion of lactose to rare sugars that were not commercially available (L-arabinose isomerase and D-tagatose 3-epimerase) were purified and expressed. Further, a new enzyme, Ketose 3-epimerase, was identified for allulose production. These enzymes perform well under various conditions of pH and temperature relevant to dairy processing. The findings will inform optimal biocatalysis pathways for producing rare sugars from dairy products and co-products. Choice experiments and pricing study revealed that yogurts sweetened with rare sugars were appealing, with consumers willing to pay more for the upgrade than the cost of the modification from sucrose. In consumer sensory testing, rare sugar-sweetened yogurt scored significantly higher than samples sweetened with stevia, the leading natural sweetener, or sucralose, the leading artificial sweetener, and identically to those with sucrose. On revealing the decrease in calories and grams of added sugar, consumers were more willing to purchase rare sugar samples than sucrose. Several researchers were trained in dairy enzymology and sensory, with three academic papers in process.

Project 4 – PI – Samuel Alcaine

Enabling natural, enzymatic processing technologies to improve dairy product quality and safety

Budget: \$48,387

This project focused on the development of novel enzymatic processing technology that can improve the microbial quality and safety of milk and other dairy foods. The work has demonstrated the successful creation of a bead-entrapped enzyme. This years' trials successfully demonstrated the ability of system control common dairy spoilage organisms like *Pseudomonas* spp. and the pathogen *Listeria monocytogenes* in milk, with minimal impact on other physical properties of the milk. The work has been shared through poster presentations at meetings. The data on trials on raw milk safety and quality are being completed.

Project 5 – PI – David Barbano

Source of control of variation in butter (and high fat dairy product) hardness.
Year 2 Project

Budget: \$73,514

NDFRC has proof of concept that cycling of the temperature of solid pure milk fat will cause softening of milk fat. Researchers presented two papers at the American Dairy Science Association (ADSA) meeting (2023 and 2024) and first of two manuscripts for the Journal of Dairy Science are in preparation. An interesting finding is that high *de novo* fatty acid is more responsive to softening due to temperature cycling. The next step was to test temperature cycling of commercial butter to determine the impact on hardness. Butter is a water in fat emulsion where the fat has a portion of its structure as solid and portion as liquid. The impact of temperature cycling on the degree of coalescence of water droplets within the fat has an impact on hardness. They have found that the water in water emulsion structure reacts differently (opposite) to the effect of cycling of temperature that they have observed in purified milk fats. The older research literature has comments about butter getting harder with time of storage but offered no explanation. Researchers are now focusing on understanding that and how it interacts with milk fatty acid composition.

Project 6 – PI – David Barbano

The role of milk salts on heat stability of milk protein in high milk protein beverages.
Year 2 Project

Budget: \$77,644

NDFRC built a small-scale apparatus to simulate thermal milk processing done in retort and ultra-high temperature (UHT) to produce shelf-stable milk and milk-based beverages and an assay to measure the amount of heat induced aggregation (and settling) of protein that will occur in a container after processing. Two companies in New York State have built an apparatus like this for in-house testing of their beverages. Researchers presented two papers on this at the 2024 American Dairy Science Association (ADSA) meeting and will present one at the 2025 ADSA meeting. They have found that the higher the lactose content, the lower the heat stability. They have also found that lower soluble mineral content promotes higher heat stability of the proteins, which is not what they expected. Complete removal of lactose and soluble mineral substantially increased the heat stability of milk protein when the pH was > 7.1. They found that steam injection during UHT degrades part of the lactose and produces acids that lower milk pH and reduce heat stability of the proteins. Thermal degradation of the lactose happens to a greater extent if the lactose is hydrolyzed versus not hydrolyzed. It is very clear that removal of lactose by filtration (instead of enzymatic hydrolysis of lactose) prevents the degradation of lactose that form acids, which lowers the milk pH and decreases heat stability of proteins.

Project 7 – PI – Syed Rizvi

Production of novel, dairy-based, nutritionally supplemented, snack products and in-mouth dissolving puffs via supercritical CO₂ extrusion

Budget: \$118,801.00

Both sweet and savory products of the infant and elderly formulations were successfully produced and evaluated for their in-mouth, self-disintegrating characteristics. Puffs designed for the elderly were low in lactose and enriched with in-process generated galacto-oligosaccharides. The savory products when coated with cheese-based seasoning were very consumer acceptable and need to be further evaluated for their shelf stability. Initial experimental trial of flavor deposition was done using methyl anthranilate (MA) and resulted in 0.11 mg MA/g puff, which is only slightly under the expected 0.19 mg/g and further testing and evaluation is currently underway.

Project 8 – PI – Carmen Moraru and Samuel Alcaine

A novel approach for producing shelf stable yogurt powders with live and active cultures

Budget: \$133,930

This project addresses the growing demand for probiotic yogurt products with a long shelf life that could be sold online and exported. Microwave vacuum drying (MVD) was optimized to produce high quality fermented dairy powders. MVD drying speed was most affected by vacuum. Drying at 2 kilopascal (kPa) was fastest, with minimum changes in key quality attributes of the products. Shelf-stable, good quality powders were produced

after 120 minutes of MVD drying, using 2 kPa pressure and 2-1-0.8 W/g power. Fermentation of MVD dried and reconstituted powders was very slow; even though some lactic survived MVD, fermentation of the reconstituted powders was too long for practical applications. Thus, the best use of this technology is to apply MVD to preserve already fermented products. After reconstitution, some lactic acid bacteria were still viable. Greek yogurt and kefir showed faster drying and lower final moisture compared to yogurt. Nonfat kefir produced the densest powder with highest dispersibility in water while dried Greek yogurt powder was the most soluble in water. Some small changes in MVD powder quality were observed during several weeks of storage at room temperature. This information can be used as a guide for MVD processing of fermented dairy products.

Project 9 – PI – Samuel Alcaine

Leavened dairy

Budget: \$44,376

The goal of this project was to develop novel types of dairy foods produced through the acidification of milk using yeast rather than bacteria. This year the project created yogurt-like products in combination with additional yeast flavor strains, to add fruity/tropical notes. The prototypes underwent sensory evaluation with consumers. The project also developed a Gouda-style cheese made solely with yeast, which was aged for three months. The cheese was evaluated by consumers and had liking parity to the traditional Gouda, indicating the yeast cheese has market potential. Lastly, the whey from the Gouda was evaluated as novel valued-added by-product.

Project 10 – PI – Samuel Alcaine and Nicole Martin

In-package pasteurization of milk and impact on shelf-life

Budget: \$70,977

The goal of this project was to evaluate the use of in-package pasteurization equipment to improve the quality and shelf-life of milk. Unfortunately, at the start of the year, the staff assigned to this project left Cornell. In the spring/summer, recruitment for a new technician did not result in acceptable candidates. In fall, a graduate student was identified to take on the project with technician support. This new team has been trained and has begun mapping the temperature/time profiles of the equipment. The core of this project will then be pursued in 2025 with a no-cost extension request for these funds.

Project 11- PI – David Barbano

Shelf-Stable High Protein Beverages - controlling heat stability of proteins
Year 1 Project

Budget: \$76,641

NDFRC have run replicates of processing for the serial removal of lactose and soluble mineral from skim milk and run heat stability testing on skim milk at 3.5 percent protein progressively decreasing lactose and soluble mineral. Next, they concentrated the 3.5 percent protein (to 10.5%) using ultrafiltration and then lowered the protein concentration to achieve seven and 3.5 percent protein concentrations with a range of different background levels of lactose and soluble minerals. Generally, protein heat stability increased as lactose and soluble minerals were removed at all protein concentrations. They are using the 10.5 percent milk protein concentrate to determine the impact of milk beverage protein concentration (3.5, 7, and 10.5 percent) and starting pH's (6.8, 7.2, 7.3 7.4, and 7.7) on heat stability of milk protein-based beverages. They found that starting pH before the thermal process is important at all protein concentrations and lower pH reduces heat stability of the protein. There may be a further lowering of pH during the thermal process caused by thermal degradation of lactose. The combination of a low starting pH before heat treatment and high lactose content that promotes thermal degradation of lactose and lowering of pH results in lower ability of the proteins to resist gelation during beverage storage.

2024 Dairy Promotion Advisory Board Members

Larry Bailey (Board Chair)- Fort Ann, New York (Dairy Farmers of America Seat)

Kim Nelson - West Winfield, New York (Agri-Mark Seat)

Julie Patterson - Auburn, New York (At-large Seat)

Jason Kehl - Strykersville, New York (Niagara Frontier Cooperative Bargaining Agency Seat)

Carl Moore - North Bangor, New York (New York Farm Bureau Seat)

Dean Handy - St. Johnsville, New York (New York State Grange Seat)

Alicia Lamb - Oakfield, New York (At-large Seat)

Judi Whittaker - Whitney Point, New York (At-large Seat)

Roberta Wolf, Lyons, New York (Rochester Cooperative Milk Producers Bargaining Agency, Inc. Seat)

Sarah Head - Homer, New York (At-large Seat)

2024 Dairy Promotion Advisory Board Meetings

Date	Location
February 27 and 28	Syracuse, New York
June 11	Chazy, New York
July 24	Syracuse, New York
September 9 and 10	Ithaca, New York
November 19 and 20	various locations in New York (educational)

Note: Dairy Promotion Advisory Board meetings are open to the public. For more information about Dairy Promotion Advisory Board meetings, recordings or minutes, visit www.agriculture.ny.gov or visit the Dairy Promotion Advisory Board's YouTube page: <https://www.youtube.com/@nysdpo9667>.