

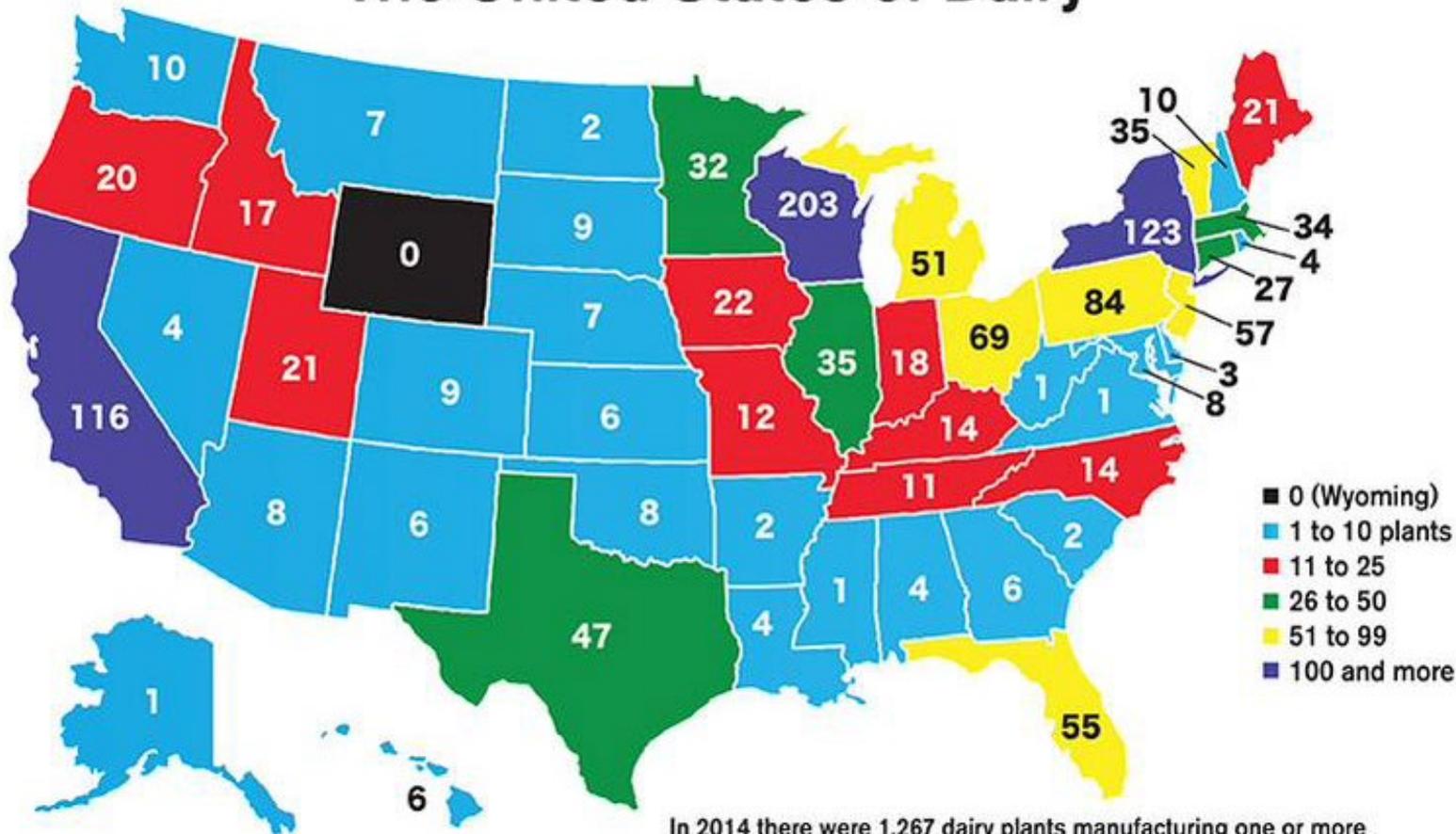
Cornell Milk Quality Improvement Program (MQIP): Introduction and the bigger picture

Cornell Milk Quality improvement Program (MQIP) and the Dairy Promotion Board

- Continued support from the NY Dairy Promotion Board since 1972 has ensured:
 - A strong dairy foods hub and unparalleled core group of scientists at Cornell and in NY
 - Critical and continuous research and extension support of NY dairy processing – providing an insurance function to NY dairy
 - Preventing plant closures and increasing processing capacity making NY 2nd in US for number of dairy processing plants
 - Investment of \$120M into new Stocking Hall by NYS
 - Training of the premier dairy foods professionals in the country
- MQIP is a unique program with a strong focus on problem solving and innovation, supporting increased utilization of NY raw milk and dairy ingredients
 - Program drives constant improvement of the quality and safety of NYS Dairy products
 - Essential to maintain and expand dairy consumption and to reduce the risk of food safety and quality issues that may negatively affect the NYS dairy industry
 - Amplifies and leverages DPO funds to obtain additional funding for dairy foods innovation and research in NY

MQIP is so important for NY because NY has the 2nd largest number of dairy processors

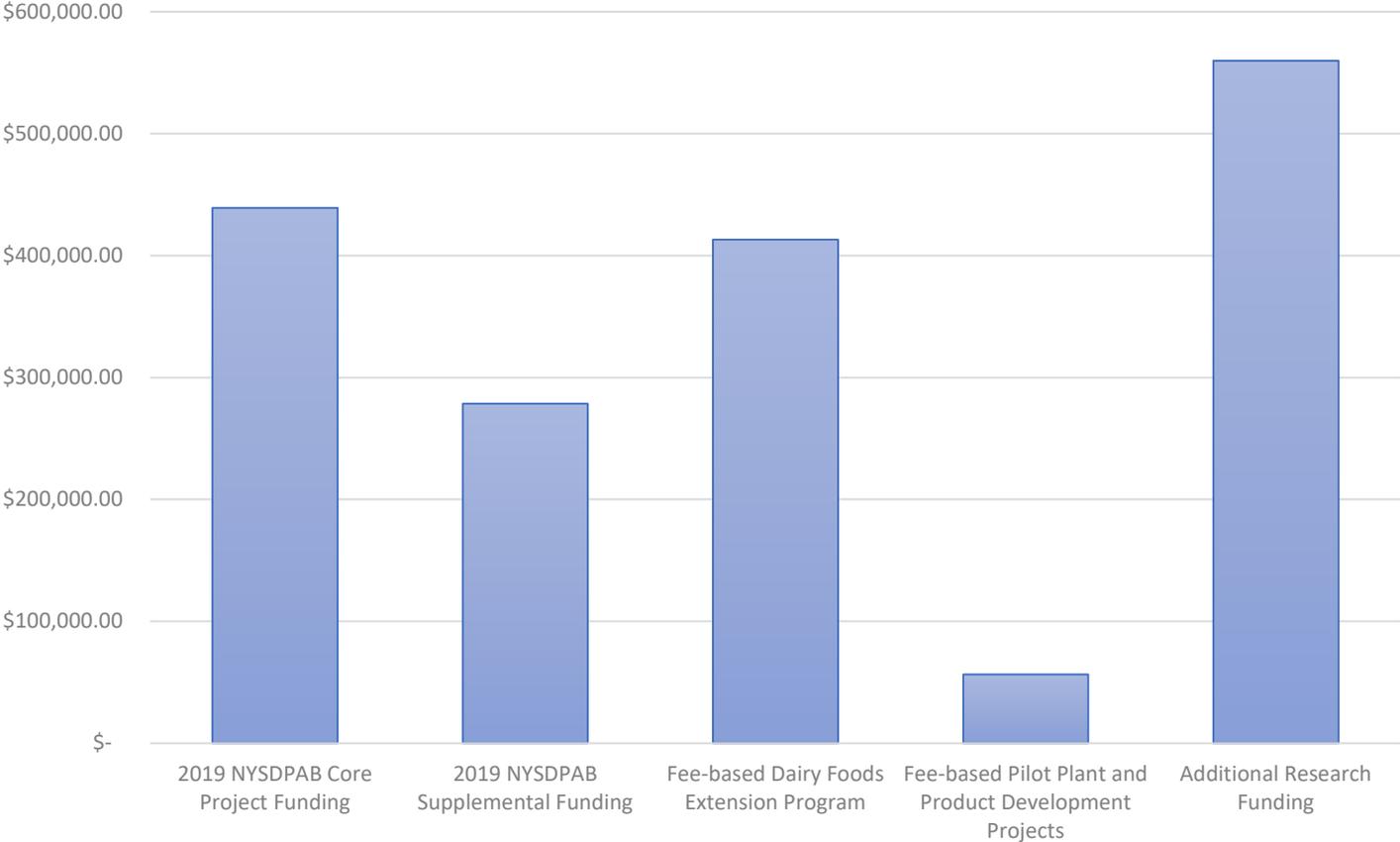
The United States of Dairy



In 2014 there were 1,267 dairy plants manufacturing one or more dairy products. Every state had at least one dairy plant except for Wyoming, according to the USDA's National Agricultural Statistics Service.

Created by Lindsay Leusby for Dairy Foods

Impacts: Leveraging Farmer Funds



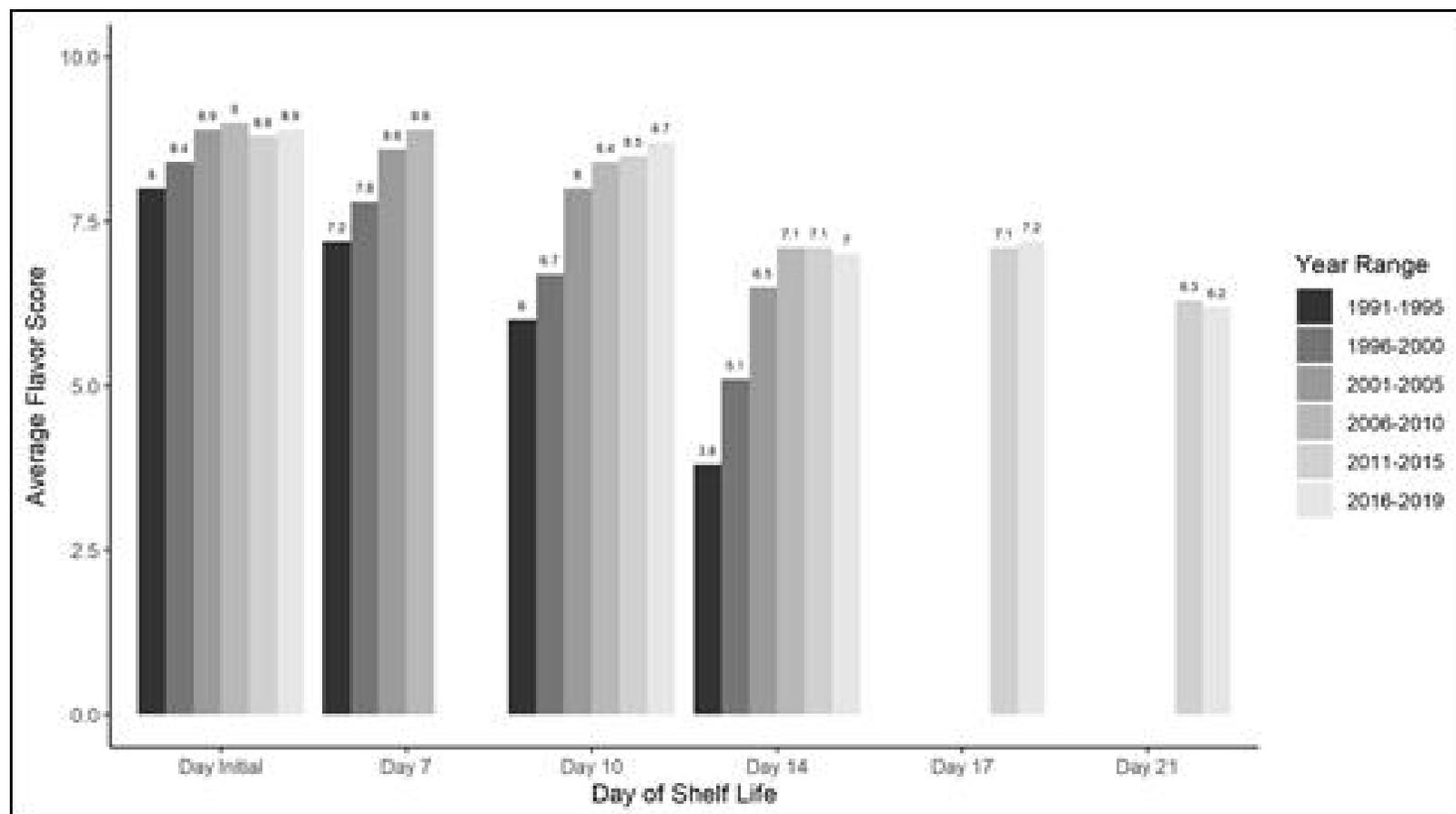
2019 NY Dairy Farmer investment of ~\$717,000 into MQIP was leveraged to secure another >\$400,000 of industry funding and >\$500,000 of grant funding from sources other than DPO. Cornell also supports this program with >\$400,000. MQIP thus secured an additional >\$1.3 million supporting dairy related work in NY

Impacts: Retaining and expanding processing plant capacity

- MQIP funded researchers and staff serve as key resources for industry:
 - MQIP process authorities facilitate innovation
 - MQIP process authorities work with facilities to develop and implement extended run times and other deviations that may be essential to establish or retain facilities in NY state

Impacts: Fluid Milk Quality

- Continuous improvement of fluid milk quality over 25 year
- Maintained strong fluid milk processing in NY state:
 - In 2019, nearly 3 billion lbs of NY raw milk was processed into fluid milk
- MQIP represents the resource for fluid milk related works across the US
- Influx of five new plants in 2019



Importance of fluid milk quality

Table 2. Major reasons for consumer dissatisfaction with food products.

Reasons	Percentage share of mentions ^a		
	Fresh foods (N = 415)	Other foods (N = 365)	All foods (N = 780)
or damaged	27.7	16.1	22.3
The quality was poorer than expected	33.0	31.8	32.5
The amount was less than it was supposed to be	7.5	15.1	11.0
The product did not correspond to the advertisement	7.5	15.1	11.0
A salesman made false or misleading claims about the product	0.0	1.4	0.8
The package was misleading	6.5	4.9	5.8
The product was not delivered when promised	0.5	0.1	0.6
A different item than the one bought was delivered	0.5	0.1	0.8
The instructions for use were unclear or incomplete	1.0	0.1	1.0
The product was unsafe or harmful	2.9	4.4	3.6
The special discount price was as high or higher than the regular price of other sellers	3.4	4.7	4.0
An advertised 'special' was out of stock	7.0	5.8	6.4
I was charged a higher price than that advertised	1.4	0.1	1.4
The store was unwilling to provide a refund or exchange	0.5	0.1	0.6
Other reasons not listed above	3.4	6.3	4.7

^a 780 mentions by 370 highly dissatisfied respondents.

Table 3. Consumer behaviour in response to unsatisfactory purchase experiences with food products.

Personal action	Share of total actions
I decided not to buy that brand again	19.6
I decided to stop using that kind of product	11.1
I decided to stop shopping at that store	8.7
I warned my family and friends about the brand, product, or store	18.4
Other personal action	3.0
Total personal action	60.8%
Direct action	
I returned the product to the seller for replacement or refund	19.2
I contacted the store to complain	14.7
I contacted the manufacturer	2.0
I contacted the manufacturers' industry association	0.4
I contacted the Better Business Bureau	0.6
I contacted a governmental agency or a public official	1.2
I contacted a private consumer advocate or consumer organization	0.4
I contacted a lawyer, went to Small Claims Court or otherwise took legal action	—
Other direct action not listed above	0.8
Total direct action	39.2%

Impacts: Cottage Cheese processing in NY

New York State Cottage Cheese Shelf-life Characteristics: A Sixteen-year Perspective

STEVEN C. MURPHY, NANCY R. CAREY, BARBARA H. HAMMOND, and KATHRYN J. BOOR*
Department of Food Science, Cornell University, 413 Stocking Hall, Ithaca, NY 14853, USA

2018 Cottage cheese production (in million lbs)

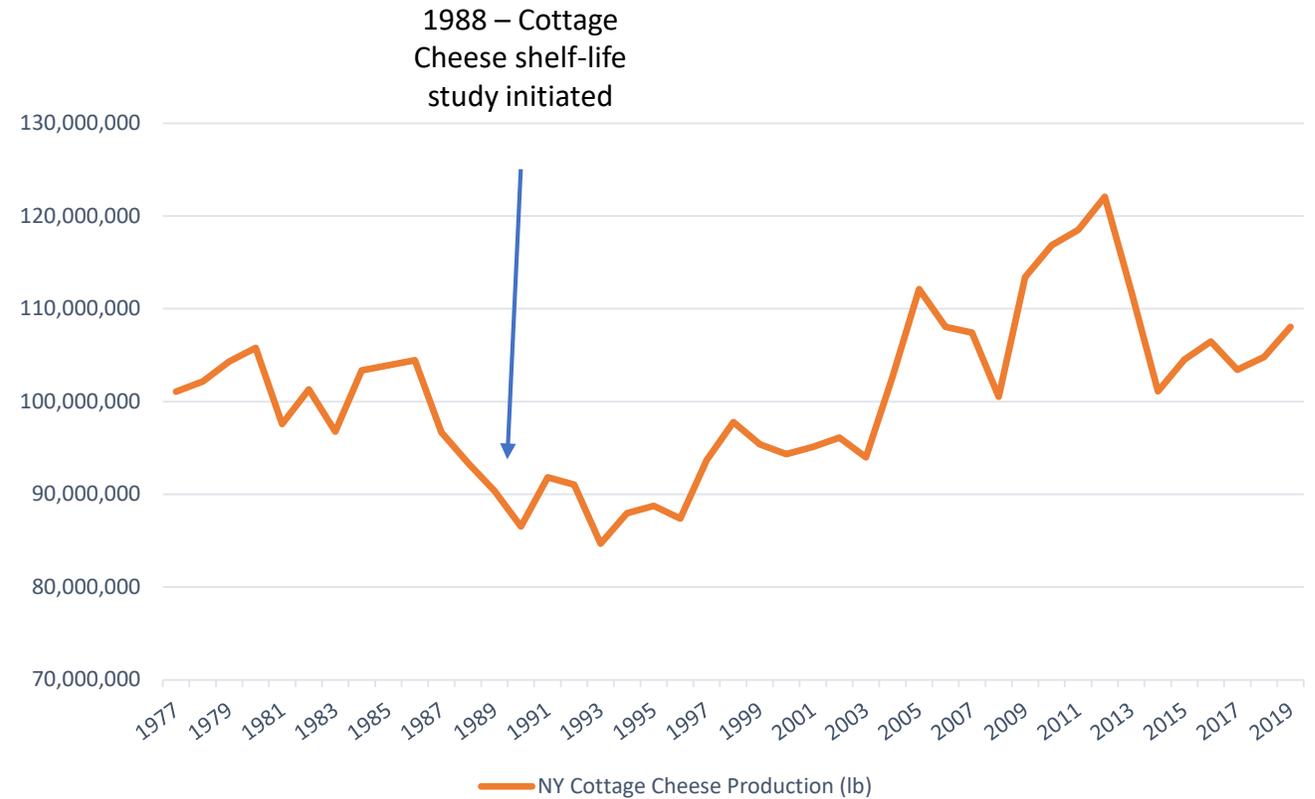
	NY	OH	CO	Other	Total US
Low fat	89.5	12	9.5	231	342
Creamed	90	29	6.5		352.5

SUMMARY

By multiple criteria, the quality of cottage cheese products manufactured in New York State has improved measurably between 1988 and 2004. From 1999 to 2004, the average sell-by date on cottage cheese products collected in New York State was 46.9 days post-packaging, in contrast to an average 28.0 day sell-by date on similar products from 1988 to 1992. At 28 days of storage at 6.1°C, gram-negative bacteria were detected in 2.0% of cottage cheese samples collected from 1999 to 2004 (n=179), as compared to 29.4% of samples collected from 1988 to 1992 (n=80). While 5.0% of the samples analyzed from 1999 to 2004 were determined to be “unacceptable” by sensory analyses at 28 days post-processing, fully 35.0% of samples tested from 1988 to 1992 were “unacceptable” at 28 days. Factors contributing to the improvements measured in New York State cottage cheese product characteristics, including adoption of carbon dioxide addition to cottage cheese dressing prior to blending, are discussed.

Impacts: Cottage Cheese processing in NY

DPO funded MQIP study saved and revitalized the NY cottage cheese industry in the early 1990s



Impacts: Enhancing diversity and quality of NYS Cheese

American Cheese Society Announces 2019 Judging & Competition Winning Cheeses

American Cheese Society Deli August 5, 2019

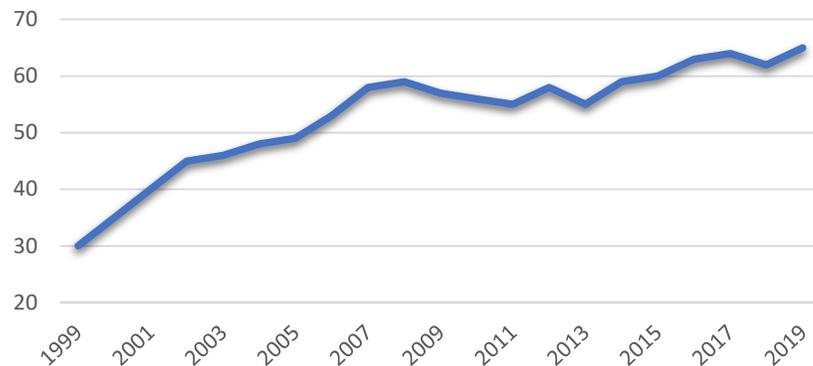


RICHMOND, Va. — “Stockinghall,” from Murray’s Cheese in New York, was named “Best of Show” among 1,742 entries at the American Cheese Society’s (ACS) 2019 Judging & Competition. The results were announced tonight at the 36th Annual ACS Conference: *Virginia Is For Cheese Lovers™*, at the Greater Richmond Convention Center, Richmond, Virginia. Second place “Best of Show” went to “Professor’s Brie” from Wegmans Food Markets in New York. Third place “Best of Show” was awarded to “Aries” from Shooting Star Creamery in California.

This year’s “Best of Show” cheeses indicate that the traditional European practice of producers working in collaboration with affineurs is growing in the U.S. Affinage is the practice of aging cheese in caves carefully regulated in temperature and humidity. Both the first and second place “Best of Show” cheeses were created through such partnerships between cheesemakers – in this case, Old Chatham Creamery – and affineurs, in this case both retailers. First place winner “Stockinghall” was produced by Old Chatham Creamery then handed over to Murray’s Cheese to age in their Long Island City caves, while “Professor’s Brie,” also made by Old Chatham Creamery, was aged in Wegmans Food Markets’ caves in Rochester, New York.

“We worked with Old Chatham Creamery for several years to make “Stockinghall,” which is their only cheddar,” said Josh Windsor, cheesemaker for Murray’s Cheese. “Aged cheddars are finicky and hard to produce—this cheese was truly a labor of love.”

Number of Cheese Processing Plants in NY



Impacts: Ensuring a competitive cheese processing industry in NY and the NE

- Research and extension efforts from Cornell were essential to facilitate cheese processing capabilities that can compete with other states (e.g., WI, CA)
 - Research on improved efficiency of cheese processing, paired with extension and outreach efforts
 - Ground breaking work on cheese making efficiency and raw milk SCC

2021 Proposals:

- Designed to have broad impacts to enhance production of a wide range of dairy products in NY (e.g., fluid milk, dairy powders)
- Addresses key dairy promotion board priorities
 - Improving the quality and safety of NY dairy products
 - Support dairy product development and innovation
 - Advance NY dairy and ensure the continued and increased utilization of NY raw milk and dairy ingredients

2021 MQIP Proposals

- **MQIP Core Proposal: Dairy Product Quality and Safety Program**
- Supplemental Project #1: Implementation of *Listeria* control strategies in small dairy facilities (continuation)
- Supplemental Project #2: Defining raw milk quality parameters that affect Greek yogurt yield and quality (continuation)
- Supplemental Project #3: Support for development of new dairy processing capabilities and start-ups that target large ethnic markets (new – 2 years)
- Supplemental Project #4: Development and validation of different approaches to extend the shelf life and quality of chocolate milk and other flavored milks (new – 1 year)
- Supplemental Project #5: Building Resilience into NY Dairy Processing: Development of best practices for raw milk handling practices at New York state dairy processing facilities (new – 1 year)
- Supplemental Project #6: Support for development of artisan and small and medium ice cream processors in NY (new – 1 year)
- Supplemental Project #7: Technology scouting for new processing technologies for New York dairy (new – 2 years)

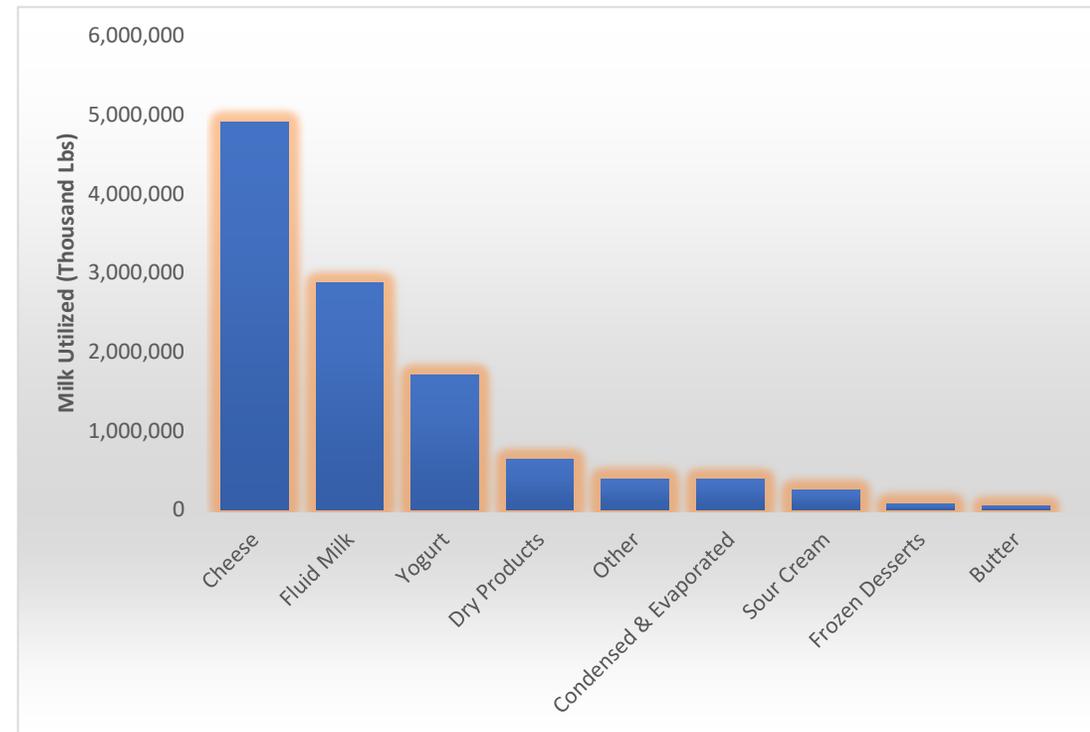
Dairy Product Quality and Safety Program

Vision

Improve New York state dairy product quality and safety from farm-to-table to position NY as the #1 producer of high quality dairy products and to assure ample processing capacity for raw milk produced in NYS

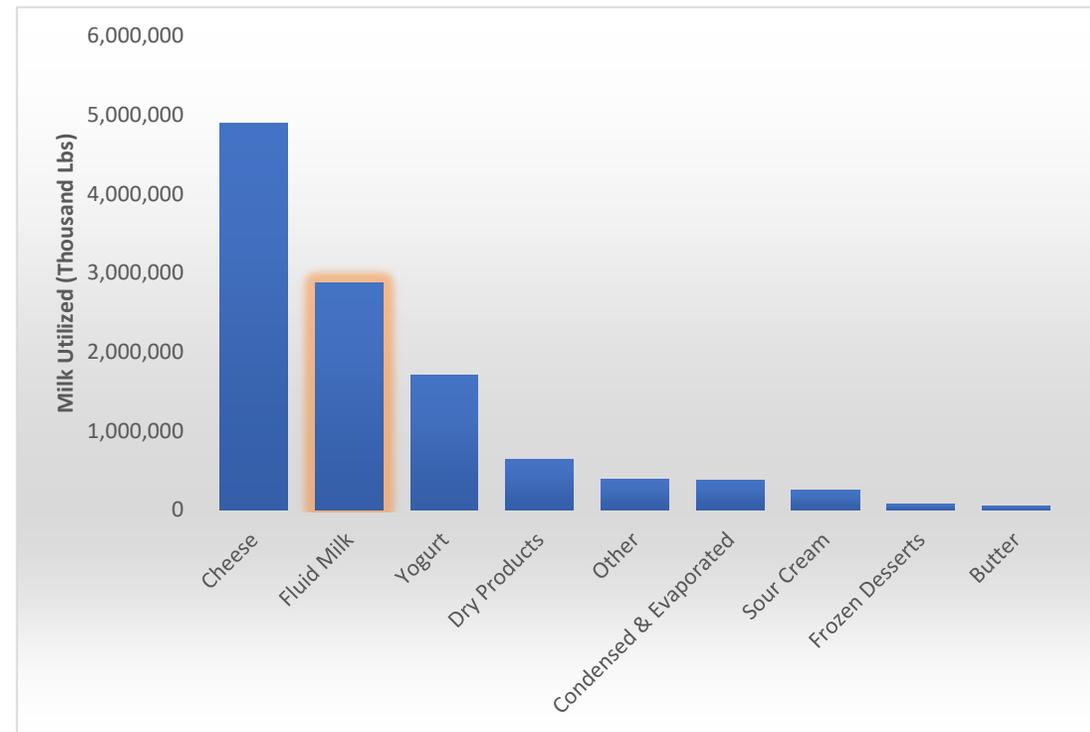
Objectives

- Fluid Milk Voluntary Shelf-Life Program
- Microbial Quality and Safety Benchmarking of Key NY Dairy Products
- Support New York (NY) Dairy Innovation through Product Development Infrastructure and Technology Transfer
- Support NYS Dairy Processing Capabilities
- Rapid Response to NYS Dairy Quality and Safety Issues



Objective 1. Milk Quality Improvement Program/Voluntary Shelf-Life Program

- In 2019 just under 3 billion lb of NY raw milk was processed into fluid milk,
- Quality improvements and close industry/academia relationships are critical to positioning the NY fluid milk industry to take advantage of new and emerging opportunities
 - Grocery eCommerce is expected to grow from a \$14.2 billion enterprise in 2017 to \$29.7 billion in 2021
 - MQIP/VSL program will ensure that NY has a substantial and strong fluid milk processing industry poised to take advantage of changing market needs



Objective 1. Milk Quality Improvement Program/Voluntary Shelf-Life Program

- Monitor the chemical, microbiological and sensory quality of the NY fluid milk supply through the Voluntary Shelf-life Program to assess individual and overall milk quality in NY
 - Data are used to work with facilities to enhance fluid milk quality and reduce the risk of food quality and food safety issues that could broadly damage the NY dairy industry



WTVM News Leader 9
February 3 · 🌐

If you have been experiencing problems with your milk, you are not alone. Over the past few days our newsroom has been flooded with concerns about spoiled milk.



WTVM.COM
Concerns of spoiled milk hit the Chattahoochee Valley
Some said it is the taste, some said it is the texture, but dozens of ...

👍🙄🙏 154 266 Comments 362 Shares

Like Comment Share

Most Relevant ▾

Write a comment...

Top Fan
Leigh Garner Wyckoff
I had a gallon go sour and I drink too much of it to sour before the date. We cook breakfast at church every Sunday morning that milk soured before the date. Then I come to Gainesville Ga and my daughters was soured. That's way too many instances.
Like · Reply · 28w · Edited 2

Trista Balboa
Went through two gallons of early spoiled milk from Walmart. Have since switched to Horizon organic. Hoping it doesn't have the same issue.
Like · Reply · 28w 1

Objective 1. Milk Quality Improvement Program/Voluntary Shelf-Life Program

- Identify innovation opportunities through established relationships with NY fluid milk processors.
- Encourage consumption and promotion of NY fluid milk through the NYS Fair fluid milk awards.
 - Overall Fluid Milk award
 - Small Processor Fluid Milk award
 - Chocolate Milk award
 - Flavored Milk award

Invitation to Attend the
2020 New York Fluid Milk Quality Awards Virtual Ceremony

Hosted by the Cornell University Milk Quality Improvement Program

Remarks by Commissioner of Agriculture, Richard Ball and Cornell Dean of the College of Agriculture and Life Sciences, Kathryn Boor

Tuesday, August 25, 2020



NYS Ag & Markets @nyagandmarkets

We raise a glass of milk to @StewartsShops and the other winners! We missed being together at @NYSFair Dairy Day to celebrate, but it was great to get together virtually to honor New York's amazing dairy industry.

Cornell CALS @CornellICALS · Aug 25

Our Milk Quality Improvement Program awarded @StewartsShops and the other winners in NY state's annual fluid milk competition, @nyagandmarkets. Stewart's topped a field of 21 dairies with congratulations! @CUMQIP #Dairy cals.cornell.edu/news/stewarts-...

5:12 PM · Aug 25, 2020 · Twitter Web App

Morning AgClips America's #1 Daily Ag News Source

HOME Upcoming Browse By Trends in Search Just Me Browse By
EVENTS TOPIC WEATHER JOBS KATE STATE

NEW YORK / STEWART'S MILK IS NEW YORK'S CREAM OF THE CROP FOR 2020

BEST MILK ... 0 COMMENTS

Stewart's milk is New York's cream of the crop for 2020

Stewart's, which also won for best-tasting chocolate milk, topped a field of 21 dairies from across the state

PUBLISHED ON AUGUST 26, 2020

A close-up photograph of the top of a glass of milk, showing a thick layer of golden-brown foam with many small, uniform bubbles.

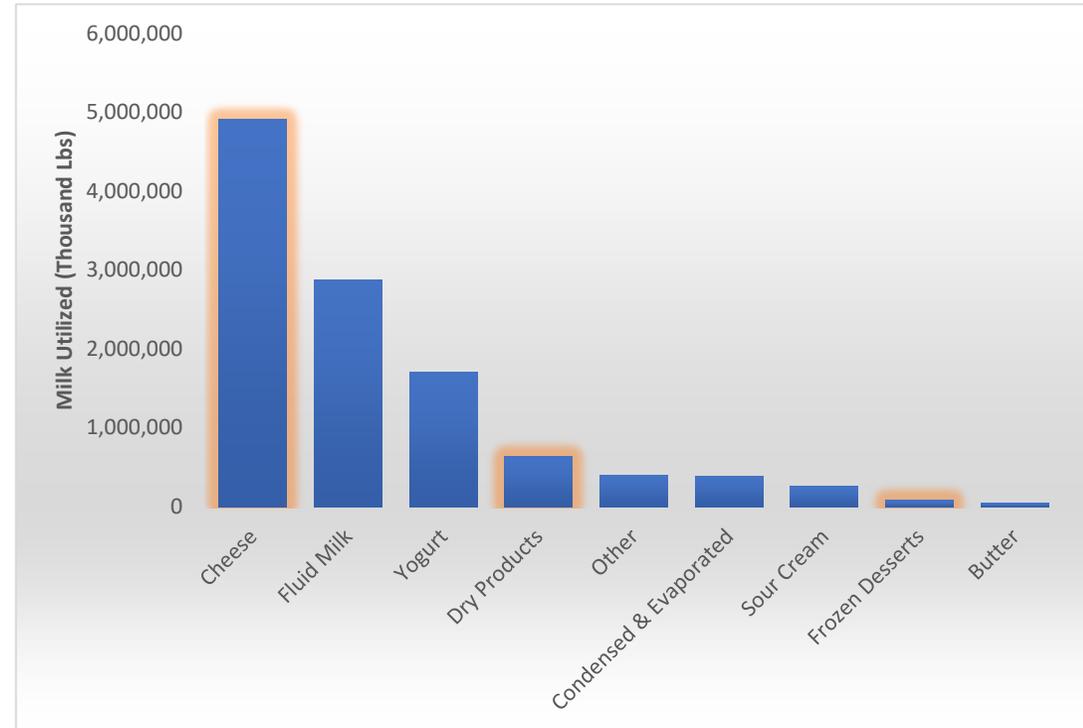
Objective 1. Milk Quality Improvement Program/Voluntary Shelf-Life Program

Key benefits for NY dairy producers and dairy industry:

- Ensure that high quality NY raw milk is processed into safe, high quality fluid milk products
- Uniquely position the NY dairy industry to take advantage of new and emerging fluid milk opportunities
- Market NY fluid milk (e.g., through fluid milk awards)
- Reduce the risk of large-scale industry shut-downs during periods of crisis (e.g., during the COVID-19 pandemic)

Objective 2. Microbial Quality and Safety Benchmarking of Key NY Dairy Products

- Benchmarking the quality and safety of NYS dairy powders
- In 2021, we will also monitor high-risk artisan dairy products for key foodborne pathogens (for example, *Listeria monocytogenes*) as a high priority as the COVID-19 pandemic has negatively affected food safety programs



Objective 2. Microbial Quality and Safety Benchmarking of Key NY Dairy Products

Key benefits for NY dairy producers and dairy industry:

- Facilitate growth of dairy powder processing in NY
 - Assure production of high quality dairy powders for export and domestic sales
- Reduce the risk of industry damaging recalls or foodborne illness outbreaks

Objective 3. Encourage New York State (NYS) Dairy Innovation through Product Development Infrastructure and Technology Transfer

- Product development and innovation is essential to growing demand for NYS dairy
- We will develop and manage incubator programs that recruit individuals or companies interested in dairy product development to NY (rather than other “dairy” states that have well supported dairy incubator capabilities)
- Funding will be leveraged through fees charged for the use of the FPDL facilities

American Cheese Society Announces 2019 Judging & Competition Winning Cheeses

American Cheese Society Deli August 5, 2019



RICHMOND, Va. — “Stockinghall,” from Murray’s Cheese in New York, was named “Best of Show” among 1,742 entries at the American Cheese Society’s (ACS) 2019 Judging & Competition. The results were announced tonight at the 36th Annual ACS Conference: *Virginia Is For Cheese Lovers™*, at the Greater Richmond Convention Center, Richmond, Virginia. Second place “Best of Show” went to “Professor’s Brie” from Wegmans Food Markets in New York. Third place “Best of Show” was awarded to “Aries” from Shooting Star Creamery in California.

This year’s “Best of Show” cheeses indicate that the traditional European practice of producers working in collaboration with affineurs is growing in the U.S. Affinage is the practice of aging cheese in caves carefully regulated in temperature and humidity. Both the first and second place “Best of Show” cheeses were created through such partnerships between cheesemakers – in this case, Old Chatham Creamery – and affineurs, in this case both retailers. First place winner “Stockinghall” was produced by Old Chatham Creamery then handed over to Murray’s Cheese to age in their Long Island City caves, while “Professor’s Brie,” also made by Old Chatham Creamery, was aged in Wegmans Food Markets’ caves in Rochester, New York.

“We worked with Old Chatham Creamery for several years to make “Stockinghall,” which is their only cheddar,” said Josh Windsor, cheesemaker for Murray’s Cheese. “Aged cheddars are finicky and hard to produce—this cheese was truly a labor of love.”

Objective 3. Encourage New York State (NYS) Dairy Innovation through Product Development Infrastructure and Technology Transfer

Benefits for NY dairy producers and dairy industry

- Facilitate dairy product innovation, which is essential to grow demand for NY milk, by providing NY processors with access to dairy experts and pilot facilities
- Industry fees that will support dairy innovation and research efforts



Dairy Product Innovation event held at Cornell in January, 2020 during the annual North East Dairy Foods Research Center meeting

Objective 4. Support NYS Dairy Processing Capabilities

- In 2019 nearly 17.4 billion lb of milk and dairy products were utilized in NYS dairy plants, up from 13.5 billion in 2009
 - In support of a resilient NY dairy industry, MQIP resources were rapidly deployed in early 2020 to (i) offer training and support for COVID-19 control in the dairy industry and (ii) offer on-line programming that allowed NY companies to on-board new employees hired during the COVID-19 pandemic.
- Will develop and offer industry workshops and work with non-Cornell entities to support workforce development
- Will continue to pursue funding for dairy foods related efforts from various sources (e.g., USDA, NDC, etc.)

Objective 4. Support NYS Dairy Processing Capabilities

- Benefits for NY dairy producers and dairy industry:
 - Critical support and assistance to NY dairy processors to ensure continued growth of dairy processing capabilities and capacity in NY
 - Workshop fees represent industry contributions to MQIP and dairy foods innovation and research efforts

Objective 5. Rapid Response to NYS Dairy Quality and Safety Issues

- Offering rapid support to the NYS dairy industry when quality or safety issues arise is a critical role that MQIP fulfills
 - Our non-regulatory, multidisciplinary team can rapidly address potential and emerging issues throughout the dairy value chain from producers to processors
- Providing guidance, consultation and technical assistance is **needed to prevent negative consequences for the NYS dairy industry**



MQIP rapid response to support the NY dairy industry during COVID-19



Dairy Foods Extension,

I am writing to express my sincere appreciation for your ongoing efforts to support the Dairy Industry. This effort has always been present; however during the Covid-19 crisis your team has really excelled and the impact of your efforts during this crisis will be long-lasting and forever appreciated.

The twice a week online forum for industry to ask questions has been very informational and given those of us working daily in an essential industry the tools we need. This has ensured that we are able to continue to operate in this challenging business climate. The success of the dairy industry is obviously critical; having your up to date, continuously available information has been very important to our ongoing success. As the landscape has changed throughout this crisis the themes of your support have adapted quickly and have kept our industry informed with the latest information and guidance.

I look forward to the day when this crisis ends and we can return back to the services we have relied on you for in the past: Employee Training, Food Safety and Product Quality guidance and assistance.

Thanks again for all that you have done and continue to do,


Carl Moody
Quality Assurance Compliance Manager
2375 South Park Avenue
Buffalo, NY 14220


P.O. BOX 718 • BATAVIA, NEW YORK 14021-0718 • 585/343-0536 • FAX 585/343-4473

05/18/2020

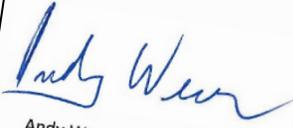
Dear Sir or Madam,

I'm writing to offer my support for the continued funding of the Cornell University's Extension Program in Food Science.

Food Manufacturing is an economic driver in the Finger Lakes, and Western NY regions. The extension agents apply a unique skillset; combining academic scientific knowledge with practical real world experience to help food manufacturers solve technical issues and remain compliant with evolving law and regulation.

There are two specific examples I'd like to comment on that illustrate the support Cornell Extension has provided to me. First, is compliance with FSMA. While developing a Food Defense Plan for my facility, the Extension Staff provided service as a third party consultant to evaluate both the compliance, and the effectiveness of the interventions I had put in place. Additionally, the Extension Agents were able to provide Food Defense training to all of the members of my cross-functional Food Defense Team. The second example is the support the Extension Office has provided during the response to the Covid-19 Crisis. During a conference call between Cornell and industry, a very academic answer was provided to a question posed by a food processor. One of the Extension Staff on the call interjected, "That was the textbook answer, however, here is how you can apply that in the plant." It is this practical application of scientific knowledge where the Extension Program demonstrates its value. It is for this insight that I support the continued funding of Cornell University's Extension Program in Food Science.

Sincerely,


Andy Werner
Sr. Director QA/R&D
O-AT-KA Milk Products

Objective 5. Rapid Response to NYS Dairy Quality and Safety Issues

Italy raises alarm over blue mozzarella

20 June 2010

f t e Share

A batch of about 70,000 mozzarella balls which turned blue upon opening has been confiscated by food authorities in Italy, officials say.

The health ministry said it had activated the European "rapid alert" system to warn of possible contamination, and announced emergency control measures on the cheese.

The cheese - made in Germany for an Italian company - has been removed from shelves and samples sent for testing.

Mozzarella is Italy's favourite cheese.

About 60% of Italians regularly eat the soft, white cheese, according to the



About 60% of Italians regularly eat mozzarella, statistics suggest



FDA finds Listeria in 'Margie' cheese; New York company recalls product

By News Desk on November 8, 2018

Sprout Creek Farm of Poughkeepsie, NY, has pulled its "Margie" cheese from retailers because laboratory tests of the finished product were positive for Listeria monocytogenes, according to the Food and Drug Administration.

Federal officials report the potentially deadly bacteria was found as a result of a routine FDA inspection of the Sprout Creek Farm production facility. Consumers who have the recalled cheese in their homes should immediately through it away,

Objective 5. Rapid Response to NYS Dairy Quality and Safety Issues

Benefits for NY dairy producers and dairy industry:

- Minimize the risk of extremely damaging food safety or quality issues linked to NY dairy products, or broader events that affect the dairy industry (e.g., COVID-19) – **insurance function**
- Improve NY dairy product quality and safety by assisting NY processors to quickly resolve quality and safety issues

2021 MQIP Proposals

- MQIP Core Proposal: Dairy Product Quality and Safety Program
- **Supplemental Project #1: Implementation of *Listeria* control strategies in small dairy facilities (continuation)**
- Supplemental Project #2: Defining raw milk quality parameters that affect Greek yogurt yield and quality (continuation)
- Supplemental Project #3: Support for development of new dairy processing capabilities and start-ups that target large ethnic markets (new – 2 years)
- Supplemental Project #4: Development and validation of different approaches to extend the shelf life and quality of chocolate milk and other flavored milks (new – 1 year)
- Supplemental Project #5: Building Resilience into NY Dairy Processing: Development of best practices for raw milk handling practices at New York state dairy processing facilities (new – 1 year)
- Supplemental Project #6: Support for development of artisan and small and medium ice cream processors in NY (new – 1 year)
- Supplemental Project #7: Technology scouting for new processing technologies for New York dairy (new – 2 years)

Supplemental Project #1: Implementation of *Listeria* control strategies in small dairy facilities – Why?

- Food safety incidences linked to dairy products represent a significant risk for the dairy industry
 - Import bans for specific apple varieties from California were enacted by a number of countries after a 2014/15 listeriosis outbreak linked to caramel apples from California
- With changing regulatory policies (e.g., more testing for foodborne disease causing bacteria) and routine government use of improved tools to detect food borne disease outbreaks (i.e., whole genome sequencing), more foodborne illness cases and outbreaks are being linked to dairy products
- *Listeria monocytogenes* as main food safety concern

Multistate Outbreak of Listeriosis Linked to Soft Raw Milk Cheese Made by Vulto Creamery

- CDC, public health and regulatory officials in several states, and the U.S. Food and Drug Administration (<https://www.fda.gov/Food/RecallsOutbreaksEmergencies/Outbreaks/ucm545787.htm>) (FDA) are investigating a multistate outbreak of *Listeria monocytogenes* infections (listeriosis).
 - *Listeria* can cause a serious, life-threatening illness.
- Six people infected with the outbreak strain of *Listeria* have been reported from four states since September 1, 2016.
 - All six people were hospitalized, and two people from Connecticut and Vermont died. One illness was reported in a newborn.
- Epidemiologic and laboratory evidence indicate that soft raw milk cheese made by Vulto Creamery of Walton, New York, is the likely source of this outbreak.
 - Six of six people interviewed reported eating various types of soft cheeses in the month before their illness started.
 - The outbreak strain of *Listeria* was identified in samples taken from three intact wheels of Ouleout cheese collected from Vulto Creamery.

NY-Made Ice Cream Bars Recalled Over Listeria Fears

Published Jan 11, 2018 at 1:04 PM | Updated at 1:06 PM EST on Jan 11, 2018



Ice cream bars that were made in New York have been recalled amid fears that they may be contaminated with listeria, a dangerous bacteria.

Fieldbrook Foods Corporation issued a voluntary recall of all orange cream bars and chocolate coated vanilla ice cream bars produced in 2017 at the company's plant in Dunkirk, New York.

The ice cream bars were sold under a variety of brand names and at a variety of merchants, including ALDI, BJ's, Dollar Tree and Price Rite. For a full list of brand names and merchants [head to the FDA's page for this recall](#).



FDA finds listeria in 19 ice cream manufacturing facilities, salmonella in 1 after recalls



By [Kelly Taylor Hayes](#)

Posted Apr 24 2019 08:53PM EDT

Video Posted Apr 24 2019 09:37PM EDT

Updated Apr 25 2019 03:38PM EDT

LOS ANGELES - Following a series of recalls in prior years, an inspection of ice cream maker facilities across the country in 2016 and 2017 found the presence of harmful bacteria and resulted in multiple other voluntary recalls, the U.S. Food and Drug Administration **announced** Wednesday.

Supplemental Project #1: Implementation of *Listeria* control strategies in small dairy facilities

Aims

- Implement and evaluate environmental *Listeria* control programs in 3 fluid milk, 3 ice cream, and 3 cheese processing facilities in NYS
 - Focus on small facilities
- Quantify and assess the effectiveness and cost of the *Listeria* control programs implemented
- Perform *Listeria* control workshops in NY and develop and advertise simple on-line tools for *Listeria* control in small dairy processing facilities

Benefits for NY dairy producers and dairy industry

- Reduced risk of damaging food safety incidences that affect trust in NY dairy products and ingredients

2021 MQIP Proposals

- MQIP Core Proposal: Dairy Product Quality and Safety Program
- Supplemental Project #1: Implementation of *Listeria* control strategies in small dairy facilities (continuation)
- **Supplemental Project #2: Defining raw milk quality parameters that affect Greek yogurt yield and quality (continuation)**
- Supplemental Project #3: Support for development of new dairy processing capabilities and start-ups that target large ethnic markets (new – 2 years)
- Supplemental Project #4: Development and validation of different approaches to extend the shelf life and quality of chocolate milk and other flavored milks (new – 1 year)
- Supplemental Project #5: Building Resilience into NY Dairy Processing: Development of best practices for raw milk handling practices at New York state dairy processing facilities (new – 1 year)
- Supplemental Project #6: Support for development of artisan and small and medium ice cream processors in NY (new – 1 year)
- Supplemental Project #7: Technology scouting for new processing technologies for New York dairy (new – 2 years)

Supplemental Project #2: Defining raw milk quality parameters that affect Greek yogurt yield and quality – Why?

- In 2019, 1.7 billion lb of milk, cream and skim were used to manufacture the 680 million lb of yogurt in NY (~16% of the entire US yogurt production)
- Studies have shown that raw milk parameters have a significant effect on yield and quality of other dairy products
 - High raw milk somatic cell counts can lead to reduced cheese yield and quality over shelf-life
 - High psychrotolerant bacteria (e.g., *Pseudomonas*) levels in raw milk may lead to production of heat stable enzymes which degrade the quality of ESL fluid products over shelf-life
- Defining critical raw milk parameters for optimization of NY Greek yogurt yield and quality will allow Greek yogurt manufacturers to define enhanced quality premiums for raw milk

Supplemental Project #2: Defining raw milk quality parameters that affect Greek yogurt yield and quality

Aims

- Quantify Greek yogurt yield and processing performance using raw milk with varying quality parameters.
 - Raw milk with varying Somatic Cell Counts (SCC) and Psychrotolerant bacteria levels will be processed into Greek yogurt in the Cornell FPDL
 - Product yield and fermentation efficiency will be evaluated
- Monitor and evaluate shelf-life of Greek yogurt processed from raw milk with varying quality parameters including sensory quality
- Develop a modeling tool to predict the impact of raw milk quality on Greek yogurt yield and quality

Benefits for NY dairy producers and dairy industry

- Continued strengthening of NY yogurt industry

2021 MQIP Proposals

- MQIP Core Proposal: Dairy Product Quality and Safety Program
- Supplemental Project #1: Implementation of *Listeria* control strategies in small dairy facilities (continuation)
- Supplemental Project #2: Defining raw milk quality parameters that affect Greek yogurt yield and quality (continuation)
- **Supplemental Project #3: Support for development of new dairy processing capabilities and start-ups that target large ethnic markets (new – 2 years)**
- Supplemental Project #4: Development and validation of different approaches to extend the shelf life and quality of chocolate milk and other flavored milks (new – 1 year)
- Supplemental Project #5: Building Resilience into NY Dairy Processing: Development of best practices for raw milk handling practices at New York state dairy processing facilities (new – 1 year)
- Supplemental Project #6: Support for development of artisan and small and medium ice cream processors in NY (new – 1 year)
- Supplemental Project #7: Technology scouting for new processing technologies for New York dairy (new – 2 years)

Supplemental Project #3: Support for development of new dairy processing capabilities and start-ups that target large ethnic markets – Why?

- Ethnic dairy products represent a growth opportunity for dairy, targeting both ethnic and non-ethnic groups
- Initial focus on Hispanic and Latin Dairy products as
 - US Hispanic population reached a record 60.6 million in 2019
 - In NY, the Hispanic population has grown 9% since 2010, and they represent 19.3% and 29.1% of the population in New York State and New York City respectively
 - In the Northeast, the Latino population grew by 1.3 million (18%) from 2010-2019
- Future focus on other Ethnic products

Supp. Proj. #3: Support for development of new dairy processing capabilities and start-ups that target large ethnic markets

Aims

- Develop and deliver targeted workshops on production of diverse, high quality, and safe ethnic Hispanic dairy products.
 - Workshops will be offered in Spanish and English
- Offer 1-on-1 outreach on production of Hispanic Dairy Products
- Identify appropriate Hispanic dairy products for production in NY state and communicate these business opportunities widely

Benefits for NY dairy producers and dairy industry

- New markets for NY milk and dairy ingredients

Hispanic products





Arequipe or **dulce de leche**, a confection from Latin America prepared by slowly heating sweetened milk to create a substance that derives its flavor from the Maillard reaction, which also changes the color. Dulce de leche is Spanish for "*candy [made] of milk.*"



Avena: Creamy dairy beverage with oats and cinnamon, which has been a staple in many Latin American homes for centuries. Avena is typically consumed cold as a refreshment.



Queso Fresco: For traditional “arepas” (food made of ground maize dough, originating from the northern region of South America in pre-Columbian times, notable in the cuisines of Colombia and Venezuela).



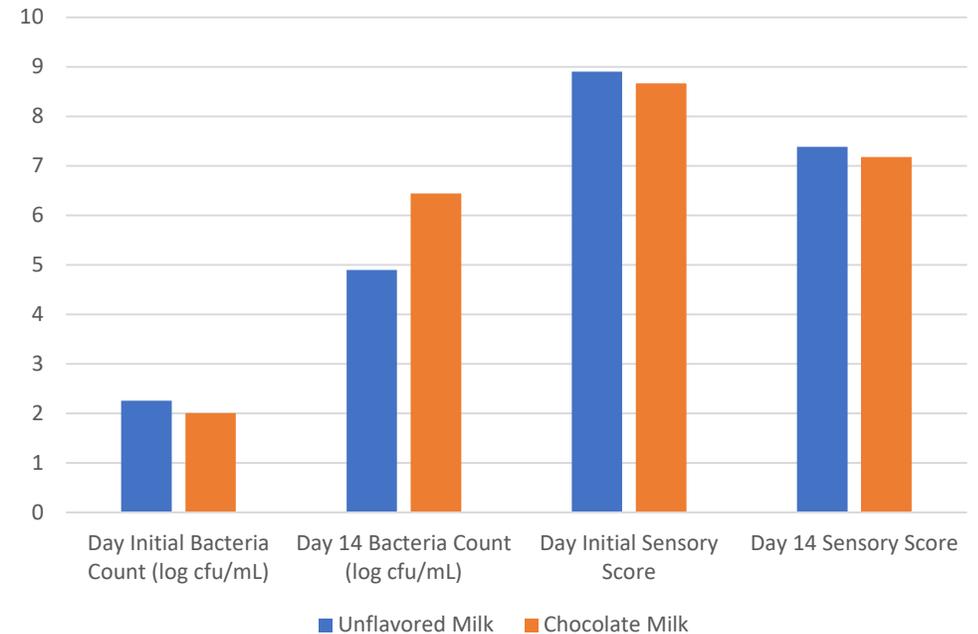
Ice cream and Drinkable yogurt with tropical, Latin American flavor profiles such as, Lucuma, passion fruit, pineapple, dragon fruit, and guanábana (soursop).

2021 MQIP Proposals

- MQIP Core Proposal: Dairy Product Quality and Safety Program
- Supplemental Project #1: Implementation of *Listeria* control strategies in small dairy facilities (continuation)
- Supplemental Project #2: Defining raw milk quality parameters that affect Greek yogurt yield and quality (continuation)
- Supplemental Project #3: Support for development of new dairy processing capabilities and start-ups that target large ethnic markets (new – 2 years)
- **Supplemental Project #4: Development and validation of different approaches to extend the shelf life and quality of chocolate milk and other flavored milks (new – 1 year)**
- Supplemental Project #5: Building Resilience into NY Dairy Processing: Development of best practices for raw milk handling practices at New York state dairy processing facilities (new – 1 year)
- Supplemental Project #6: Support for development of artisan and small and medium ice cream processors in NY (new – 1 year)
- Supplemental Project #7: Technology scouting for new processing technologies for New York dairy (new – 1 year)

Supplemental Project #4: Development and validation of different approaches to extend the shelf life and quality of chocolate milk and other flavored milk – Why?

- Chocolate milk is one of the few categories of fluid milk that has seen gains in per capita consumption in the US, yet compared with unflavored milk has lower microbial and sensory quality over shelf-life
- Identifying causes of this reduced quality and providing guidance to NY processors to produce a longer-lasting, better-tasting chocolate milk product will position NY industry to capitalize on current consumer consumption trends



Supplemental Project #4: Development and validation of different approaches to extend the shelf life and quality of chocolate milk and other flavored milk

Aims

- Define raw milk quality parameters and cocoa powder quality parameters that can be used by NY fluid milk processors to improve the quality of chocolate milk
- Identify optimum processing parameters to extend chocolate milk shelf-life
- Support NY Dairy Industry to expand and improve production of chocolate milk

Benefits for NY dairy producers and dairy industry

- Growth of chocolate and flavored fluid milk processing using NY milk

2021 MQIP Proposals

- MQIP Core Proposal: Dairy Product Quality and Safety Program
- Supplemental Project #1: Implementation of *Listeria* control strategies in small dairy facilities (continuation)
- Supplemental Project #2: Defining raw milk quality parameters that affect Greek yogurt yield and quality (continuation)
- Supplemental Project #3: Support for development of new dairy processing capabilities and start-ups that target large ethnic markets (new – 2 years)
- Supplemental Project #4: Development and validation of different approaches to extend the shelf life and quality of chocolate milk and other flavored milks (new – 1 year)
- **Supplemental Project #5: Building Resilience into NY Dairy Processing: Development of best practices for raw milk handling practices at New York state dairy processing facilities (new – 1 year)**
- Supplemental Project #6: Support for development of artisan and small and medium ice cream processors in NY (new – 1 year)
- Supplemental Project #7: Technology scouting for new processing technologies for New York dairy (new – 2 years)

Supplemental Project #5: Building Resilience into NY Dairy Processing: Development of best practices for raw milk handling practices at New York state dairy processing facilities – Why?

- Normal operating status of dairy processing facilities is susceptible to disruption during volatile, uncertain, chaotic and ambiguous (VUCA) conditions, such as those encountered during the COVID-19 pandemic
- Preliminary data collected as part of the Voluntary Shelf-Life Program in May 2020 indicate that many fluid milk processors in NY routinely hold raw milk for up to 48-72h prior to processing
 - Extended raw milk hold times may reduce the quality of processed dairy products including fluid milk, cheese, yogurt, etc.
- Best practices for raw milk handling during VUCA conditions and even under normal operation, would benefit the dairy industry by reducing the risk of quality and safety issues

Supplemental Project #5: Building Resilience into NY Dairy Processing: Development of best practices for raw milk handling practices at New York state dairy processing facilities

Aims

- Administer a raw milk handling survey to NY dairy processors with a focus on storage conditions, cleaning and sanitation procedures and testing protocols
- Experimentally determine the impact of key raw milk handling practices on the quality of finished dairy products using fluid milk as a model system
- Develop and distribute best practice recommendations to NY dairy processors

Benefits for NY dairy producers and dairy industry

- Reduced susceptibility of NY processors to produce products with quality defects under volatile, uncertain, chaotic and ambiguous (VUCA) conditions
- Enhanced resilience of NY dairy industry

2021 MQIP Proposals

- MQIP Core Proposal: Dairy Product Quality and Safety Program
- Supplemental Project #1: Implementation of *Listeria* control strategies in small dairy facilities (continuation)
- Supplemental Project #2: Defining raw milk quality parameters that affect Greek yogurt yield and quality (continuation)
- Supplemental Project #3: Support for development of new dairy processing capabilities and start-ups that target large ethnic markets (new – 2 years)
- Supplemental Project #4: Development and validation of different approaches to extend the shelf life and quality of chocolate milk and other flavored milks (new – 1 year)
- Supplemental Project #5: Building Resilience into NY Dairy Processing: Development of best practices for raw milk handling practices at New York state dairy processing facilities (new – 1 year)
- **Supplemental Project #6: Support for development of artisan and small and medium ice cream processors in NY (new – 1 year)**
- Supplemental Project #7: Technology scouting for new processing technologies for New York dairy (new – 2 years)

Supplemental Project #6: Support for development of artisan and small and medium ice cream processors in NY—Why?

- Considerable interest in development of new ice cream and dairy-based frozen dessert production
 - Opportunity for expansion of utilization of NY raw milk and dairy ingredients
 - Considerable food safety risks, particularly for start-ups and small processors
- Goal is to facilitate growth of this industry while minimizing the risk of reputational damage to NY dairy industry

How Ice Cream Gets Contaminated—and Sometimes Kills



It's not the first time contaminated ice cream has sickened Americans. In December 2014, Snoqualmie Gourmet Ice Cream, Inc. **issued a voluntary recall** of several of its ice cream, gelato, custard and sorbet products when they tested positive *Listeria*, and **sickened two people**. In 1994, 200,000 people **became ill** from eating Schwan's ice cream that had been transported by a distribution truck that had **previously transported** non-pasteurized liquid eggs contaminated with *Salmonella*.

Other recent dairy outbreaks include a **2014 outbreak of *Listeria*** in cheese and dairy products produced by Oasis Brands, Inc. Five people became ill and one died. A year earlier, **six people were infected** with *Listeria* in Crave Brothers Farmstead Cheese Company cheese products—one person died.

Supp. Proj. #6: Support for development of artisan and small and medium ice cream processors in NY

Aims

- Develop and deliver targeted workshops on production and food safety of ice cream and frozen desserts
- Develop ice cream safety and manufacturing resource materials and offer 1-on-1 outreach to ice cream and dairy-based frozen dessert start-ups and enterprises

Benefits for NY dairy producers and dairy industry

- Reduced risk of negative publicity due to food safety issues at small and start up ice cream businesses
- Development of new ice cream and frozen dessert businesses that utilize NY milk and dairy ingredients

2021 MQIP Proposals

- MQIP Core Proposal: Dairy Product Quality and Safety Program
- Supplemental Project #1: Implementation of *Listeria* control strategies in small dairy facilities (continuation)
- Supplemental Project #2: Defining raw milk quality parameters that affect Greek yogurt yield and quality (continuation)
- Supplemental Project #3: Support for development of new dairy processing capabilities and start-ups that target large ethnic markets (new – 2 years)
- Supplemental Project #4: Development and validation of different approaches to extend the shelf life and quality of chocolate milk and other flavored milks (new – 1 year)
- Supplemental Project #5: Building Resilience into NY Dairy Processing: Development of best practices for raw milk handling practices at New York state dairy processing facilities (new – 1 year)
- Supplemental Project #6: Support for development of artisan and small and medium ice cream processors in NY (new – 1 year)
- **Supplemental Project #7: Technology scouting for new processing technologies for New York dairy (new – 2 years)**

Supplemental Project #7: Technology scouting and evaluation for new processing technologies for New York dairy – Why?

- Implementation of new dairy processing technologies in NY is essential to drive dairy innovation
- A rational approach to identifying promising technologies is missing
- Failed investments into inappropriate technologies slows speed of innovation in NY dairy
 - Considerable negative consequences for NY dairy industry

Supp. Proj. #7: Technology scouting and evaluation for new processing technologies for New York dairy

Aims

- Develop and implement a process to identify new dairy processing technologies emerging around the globe
 - Focus on technologies that could (i) improve quality and shelf-life of dairy products; (ii) improve production and processing efficiency, and (iii) allow for new functionalities of dairy-derived ingredients
- Evaluation of dairy processing technologies that are identified as promising
 - Will capture and score key parameters, such as (i) the technological goal (e.g., fluid milk shelf life extension, spore removal, etc.), (ii) cost; (iii) effectiveness, and (iv) application readiness
- Distribution of information to NY Dairy processors
 - Will be achieved through (i) articles in publications targeted to NY dairy processors, (ii) 1-on-1 conversations with NY dairy processors, and (iii) presentations at dairy related meetings targeting NY processors

Benefits for NY dairy producers and dairy industry

- Enhanced innovation in dairy processing in NY, facilitating new outlets for NY milk and dairy products

Summary of MQIP Proposals

Proposal Name	Budget	PIs
Main proposal: Dairy Product Quality and Safety Program (continuation)	\$448,400	Kathryn Boor Martin Wiedmann Nicole Martin
Supp. Project 1: Implementation of Listeria Control Strategies in Small Dairy Facilities (continuation)	\$74,340	Martin Wiedmann
Supp. Project 2: Defining Raw Milk Quality Parameters that Affect Greek Yogurt Yield and Quality (continuation)	\$74,340	Martin Wiedmann Sam Alcaine Nicole Martin
Supp. Project 3: Support for development of new dairy processing capabilities and start-ups that target large ethnic markets (new – 2 yrs)	\$76,700	Kathryn Boor
Supp. Project 4: Development and validation of different approaches to extend the shelf life and quality of chocolate milk and other flavored milks (new – 1 yr)	\$76,700	Kathryn Boor Nicole Martin
Supp. Project 5: Building Resilience into NY Dairy Processing: Development of best practices for raw milk handling practices at New York state dairy processing facilities (new – 1 yr)	\$40,710	Kathryn Boor Nicole Martin
Supp. Project 6: Support for development of artisan and small and medium ice cream processors in NY (new – 2 yrs)	\$55,460	Martin Wiedmann
Supp. Project 7: Technology scouting and evaluation for new processing technologies for New York dairy (new – 2 yrs)	\$43,660	Kathryn Boor

Summary

- Continuation of the MQIP including the main **Dairy Product Quality and Safety Program (DPQSP)** and associated supplemental projects is essential for growth and vitality of the NY dairy system
 - MQIP provides services and support that ensure the safety and positive reputation of NY dairy products, which are necessary for expanding demand for NY dairy products and dairy ingredients
 - 2020 efforts clearly illustrate the importance of the program in protecting the NY dairy industry
 - MQIP is nationally recognized for leading rapid programming to support the NY dairy industry in addressing COVID-19, helping to prevent dairy plant shut-downs due to COVID-19 as well as negative publicity that could have affected export markets (as happened for the meat industry).
 - The MQIP infrastructure at Cornell has been proven to reduce the risk of food safety and quality problems that negatively affect consumer confidence and thus would reduce the demand for NY dairy products and ingredients.
 - The MQIP provides much needed support for dairy innovation in NY
 - The MQIP has consistently leveraged DPO funding to recruit additional financial support for research and innovation that benefits the NY dairy industry.

