

The Milk Quality Improvement Program

Mission and Background

The mission of the Milk Quality Improvement Program (MQIP) is to support New York State (NYS) milk producers and processors in their efforts to maintain and improve the quality of raw and processed milk and milk products to ensure their safety. The MQIP contributes to improve financial returns to all segments of the NYS dairy industry in two important ways. First, the MQIP provides access to expert technical advice for the improvement of the quality of milk products. Second, the regular plant visits and audits conducted as part of the program are an important non-regulatory resource to assist processors.



The NYS Dairy Promotion Order funded its first project with the Food Science Department in 1972 to examine the quality of milk purchased by NYS public schools. This survey revealed a direct correlation between milk quality and product consumption. To address this, the NYS Dairy Promotion Order has provided support for Cornell's ongoing research and extension efforts directed toward improvement of NYS dairy.

Approach

The Voluntary Shelf Life Program (VSL) is the cornerstone of the MQIP. Under this program, each volunteering processing plant is sampled at least two times each year. Fluid milk products from each plant are collected and subjected to laboratory evaluations initially and continuing over the shelf-life of the products. Analyses include chemical, microbiological, and sensory evaluation.



In addition to the VSL program, MQIP conducts applied research relating to raw milk and finished product quality, with emphasis on microbial contamination and growth patterns and the influence of these microorganisms on milk flavor and shelf life. ***The MQIP works with farmers to better farm management practices and producers and processors on dairy safety and spoilage.***

Extension Training

The MQIP and the Cornell Dairy Foods Extension Staff offer numerous workshops and training courses in topics that include:

- HTST and vat pasteurization
- Dairy HACCP
- Basic dairy science and sanitation
- Sensory evaluation

Cornell Dairy Foods Extension also offers course and Certificate Programs in:

- Yogurt & Cultured Dairy Foods
- Cheese Making
- Fluid Milk

MQIP and Cornell Dairy Foods Extension provide support for the NYS Association for Food Protection and the NYS Cheese Manufacturers' Association annual meetings and work closely with the NYS Dept. of Agriculture & Markets to offer annual courses and updates that include the regional laboratory seminars, the Certified Milk Inspectors schools and regional updates and the Processing Plant Superintendents regional updates. Tailored training, both on and off site, may be available upon request. For more information go to the Cornell Food Science Extension website at:

<http://dairyextension.foodscience.cornell.edu>



Further Information

For more information on raw and pasteurized milk and milk products, the Milk Quality Improvement Program has created informational documents covering a wide range of topics pertinent to the dairy industry. Topics include:

- [Basic Dairy Bacteriology](#)
- [The MQIP Voluntary Shelf-Life Program](#)
- [The Preliminary Incubation Count for Raw Milk](#)
- [Coliform Bacteria](#)
- [Lactic Acid Bacteria](#)
- [Listeria monocytogenes](#)
- [Light-Induced Flavor Defects in Milk and the Light-Oxidized Flavor Threshold](#)
- [Pasteurization versus Ultra-Pasteurization](#)
- [Alkaline Phosphate Testing](#)
- [Recommendations for Improved Milk Shelf-Life and Product Safety](#)
- [The Dangers of Consuming Raw Milk](#)
- [Raw Milk Quality Tests](#)
- [Raw Milk Bacteria Tests](#)
- [Storage and Handling of School Milk](#)
- [Microbial Spoilage and Fluid Milk Shelf-Life](#)
- [Sanitation in Soft-Serve Frozen Desert Operations](#)
- [Psychrotrophic Spore-Forming Bacteria](#)
- [Dairy Starter Cultures](#)
- [The Laboratory Pasteurization Count](#)
- [Vitamin Fortification](#)

Want more information on the [MQIP](#)? Contact Nicole Martin (nicole.martin@cornell.edu) in the Milk Quality Improvement Program or visit our website <https://foodsafety.foodscience.cornell.edu/mqip/>

Fluid milk quality research in the Milk Quality Improvement Program has been funded by the National Dairy Council and the New York State Dairy Promotion Advisory Board, dairy farmers dedicated to the production, manufacture and distribution of quality dairy products.