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# Robert Ralyea



Senior Extension Associate

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Rob Ralyea is a senior extension associate in the Department of Food Science. He studied at Kansas State University (B.S., Animal Science and Industry), and Cornell University (M.S., Food Science). He joined the Cornell faculty in 2004 after retiring from the United States Army. He manages dairy extension programs throughout the State of NY. He is an extension outreach member of the Milk Quality Improvement Program, which utilizes a Voluntary Shelf-Life (VSL) Program to analyze the sensory, chemical, and microbiological characteristics/profiles of dairy products manufactured in New York State. This program is designed to evaluate the overall quality and shelf-life of grade A dairy products and to encourage and provide support to dairy plants to maintain and improve product quality.

#### Research Focus

Scientists in the Milk Quality Improvement Program conduct basic and applied research in microbial food safety and food quality using classical and molecular microbiological techniques. Work in progress focuses on the microbial ecology of dairy systems, identifying specific sources of environmental contamination and use molecular techniques to help better understand the genetics, ecology, and physiology of dairy system bacterial contaminants. Current research focuses primarily around Bacillus cereus and Paenibacillus spp. Specific MQIP projects include research on Gram-positive bacteria, profiles and characteristics of spoilage microorganisms and reasons behind accelerated spoilage of chocolate milk products, tracking and detection of contaminants in the dairy industry and raw milk quality and safety.

#### Outreach and Extension Focus

Collaborate with the laboratories administering the Milk Quality Improvement Program (MQIP). The Milk Quality Improvement Program utilizes a Voluntary Shelf-Life (VSL) Program to analyze the sensory, chemical, and microbiological characteristics/profiles of dairy products manufactured in New York State. This program is designed to evaluate the overall quality and shelf-life of grade A dairy products and to encourage and provide support to dairy plants to maintain and improve product quality. Develop and execute dairy training workshops for personnel in the dairy industry as part of the land grant mission.

Involved in the development, implementation, and assistance in extension training programs and workshops and development of written informational material related to dairy microbiology, production and quality control procedures. The MQIP offers individual assistance to producers and milk plant operators to help troubleshoot specific problems in an effort to improve the quality and consumer acceptability of milk and milk products. Works with NYS Agriculture and Markets in training Certified Milk Inspectors and providing annual updates for dairy specialists, conducts training programs for Dairy Processing Plant Superintendents, provides resource information for small entrepreneurs starting dairy processing businesses involving cows, goats or sheep and participates on dairy industry committees concerned with equipment, processing and the environment. He also provides resource information on dairy products to Cooperative Extension agents throughout New York State.

Primary contact for moving artisan cheese movement forward in NY. Responsible for helping artisans understand current regulations and food safety responsibilities of food manufacturers.

Oversees the Food Production and Development Laboratory, Cornell University's state of the art food research space.

### **Additional Links**

- Scientific Facts about Milk
- Lab Homepage

#### Awards and Honors

• Sign of Sustainability (2012) Sustainable Tompkins Board of Directors

## Departments

• Food Science

#### Concentrations

- Agricultural Security
- Agroterrorism
- Dairy Microbiology
- Food Research, Processing Equipment
- Food Safety
- Milk Quality
- Milk Quality, Dairy Processing, Dairy Troubleshooting, Dairy Training, Workshops, Artisan Cheese, Cheese Manufacturing

#### Education

Master of Science

Cornell University

1998

Bachelor of Science

Kansas State University

1996

AAS

Alfred State College

1984