Workshop: Spore Sources and Transmission from Farm to Fork—Detection and Control Strategies

8 Introduction to dairy-relevant sporeformers and detection methodologies. M. Wiedmann*, College of Food Science, Cornell University, Ithaca, NY.

Spore-forming bacteria are a diverse group of bacteria that can grow at various temperatures, survive extreme conditions, and persist in farm and processing environments for years. These organisms are capable of growing in and affect the quality of fluid milk, cheese, and dairy powders. The dairy industry must adopt a systems approach to reducing the impact of spore-forming bacteria. Key to this goal is the development and implementation of appropriate testing methods for spore-forming bacteria, from spoilage organisms to pathogens. This session will introduce participants to the most common spore-forming bacteria encountered in the dairy industry, and how methodologies have emerged to detect, enumerate, and track these organisms.

9 On-farm sources and control strategies. N. Martin*, Cornell University, Ithaca, NY.

Spore-forming bacteria are found ubiquitously in natural environments, including on dairy farms. Manure, soil, water and other materials in cow environments can harbor millions of spores, exposing the cow and, ultimately, raw milk to these organisms. Research indicates that various on-farm management practices are associated with the presence and levels of spore-forming bacteria in bulk tank raw milk. This session will explore the types of management practices in various locations across the United States that are associated with psychrotolerant, mesophilic and thermophilic spores in bulk tank raw milk. Additionally, attendees will learn about approaches to reducing spore levels in raw milk through simple and inexpensive intervention strategies.

10 Introduction to dairy relevant sporeformers and detection methodologies. T. Erickson*, Ecolab, St. Paul, MN.

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