Researchers aim to demystify complex ag water requirements for Produce Safety Rule

March 27 2019, by Blaine Friedlander

Sprays of water irrigate leafy greens overhead on a Long Island farm in Brookhaven, New York. Credit: Sam Nolan

In an effort to ensure the safety of fresh fruits and vegetables for consumers, Cornell University's Produce Safety Alliance is helping to explain complex federal food safety rules and develop new ways to assess agricultural water use.

"Water used during the production of fresh fruits and vegetables represents a potential pathway for contamination with human pathogens," said Gretchen Wall, Cornell's Produce Safety Alliance coordinator and lead author of "Key Outcomes From a Collaborative Summit on Agricultural Water Standards for Fresh Produce."

The work resulted from a two-day national meeting last year of growers, scientists, produce industry members and regulators on how to improve the Produce Safety Rule, specifically the agricultural water provisions, an important component of the Food Safety Modernization Act (FSMA).

In the Produce Safety Rule, Wall said, microbial quality standards and testing requirements were established so that when agricultural water makes contact with produce—whether in the growing, packing or holding phases of production—the risks associated with water are reduced. But some of the provisions in the regulation were difficult to understand and challenging to implement on farms, making it hard for farms to comply.

Betsy Bihn, director of the Cornell's Produce Safety Alliance, obtains a water sample. Credit: Robyn Wishna

"The United States is a big place with many different water sources and systems," said Betsy Bihn, senior extension associate and director of the Produce Safety Alliance, a collaboration between Cornell, the U.S. Food and Drug Administration, and the U.S. Department of Agriculture.

Nationwide, the FDA estimates that water testing may cost producers about $37 million annually. For individual small farms, that could mean spending about $1,000 each year for testing, but it could substantially reduce the use of contaminated agricultural water and the risk of foodborne illness.

To keep testing costs reasonable, for example, stakeholders suggested

allowing multiple farms that draw water from the same canal or river to share representative samples. In addition, stakeholders suggested better coordination and access to water quality data from irrigation districts, state or municipal agencies, and the Environmental Protection Agency.

Bihn and her team provide science-based educational materials and training for produce growers to raise awareness of agricultural water safety, and encourage action in managing food safety risks through testing water sources and conducting annual assessments of water systems.

More information: Gretchen L. Wall et al, Meeting Report: Key Outcomes from a Collaborative Summit on Agricultural Water Standards for Fresh Produce, *Comprehensive Reviews in Food Science and Food Safety* (2019). DOI: 10.1111/1541-4337.12434

Provided by Cornell University