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Non-thermal intervention processing for inactivation bacteria at Eastern Regional Research Center (ERRC)

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Fruits and vegetables are frequently in contact with soil, insects, animals, and humans during growing, harvesting, and in the processing plant. The ability of pathogenic bacteria to adhere to surfaces of fruits and vegetables continues to be a potential food safety problem of great concern to the produce industry. Presence of human bacterial pathogens in fresh produce and outbreaks of diseases has led to costly recalls. Fruits and vegetables are heat sensitive food items that require unconventional processing treatments that may not be detrimentally to the quality of fruits and vegetables. The annual produce consumption in dollar amount in the U.S. alone is over $1 billion dollars and nearly most are washed in chlorinated water. However, the use of chlorine is of concern due to the potential formation of harmful by-products and can only achieve approximately 1 to 2 log reductions of native microflora. Thus, there is much interest in developing safer and more effective alternative non-thermal intervention technologies including sanitizers other than chlorine for inactivating bacteria on fruits and vegetable surfaces. This symposium is aimed to address some of the work done in this area to address the issues listed above.

Biography

Dike O. Ukuku completed his Ph.D. in Food Microbiology from Wayne State University, Detroit, Michigan, 1995. He is a fellow of King-Chaves-Parks Future Faculty, 1993, and a fellow of Japan Society for Promotion of Science, 2006. He was invited to the Membership of Science Advisory Board, 2009-present, a Gold Medalist, for Outstanding public Service 2009, received USDA-OPEDA Unsung Hero award, 2010, and Outstanding Technical Achievement for Food Safety, 2012 award. He has authored or coauthored more than 60 publications. He is on editorial board membership of three scientific journals, has numerous invitations to act as an in depth subject matter expert for manuscripts submitted to scientific journals, as well as Grant programs including USDA's SBIR phase 1, BARD and 1890 Institutions.

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