High Voltage Atmospheric Cold Plasma (HVACP) and Its Application in Food Processing

Date: January 14, 2014

The departmental seminar will be presented by Dr. Kevin M. Keener of Purdue University. Dr. Keener is an OSU FABE alumnus, and will be presenting on a novel, non-thermal technology that can be used to reduce foodborne pathogens in packaged foods. The seminar will be held in Room 219 Ag Engineering (Columbus) with videolink to Wooster, from 1:50-2:45 PM.

The abstract for Dr. Keener's seminar can be seen below:

High Voltage Atmospheric Cold Plasma (HVACP) is a novel, non-thermal technology that can be used to treat packaged foods for significant reductions in foodborne pathogens and spoilage organisms. HVACP has a number of advantages over traditional food processing technologies including: non-thermal pasteurization capability, portability, flexible design, low energy requirement, and utilization of current packaging materials and fill gases. The HVACP process generates reactive gas species (RGS) from fill gas contained within the package that are bactericidal, sporicidal, and fungicidal. After a short period of time the created RGS convert back to their original state (e.g., O2, CO2, N2, etc.) leaving no chemical residuals. The technology is adaptable to a variety of package types, line production speeds, and existing manufacturing processes. This presentation will highlight results from a number of completed research studies including strawberries, cantaloupe, vegetable seeds, tomatoes, shell eggs, and raw chicken. The successful commercialization of this technology will improve the safety and extend shelf-life of many food products.