

1106-92-2063

**Daniel S. Munther\*** (d.munther@csuohio.edu), **Jianhong Wu**, **Sanyi Tang**, **Yanni Xiao**  
and **Helio Shimozako**. *Modeling cross-contamination during poultry processing: dynamics in the  
chiller tank*. Preliminary report.

Understanding mechanisms of cross-contamination during poultry processing is vital for effective pathogen control. As an initial step toward this goal, we develop a dynamic model of the chilling process in a typical high speed Canadian processing plant. An important attribute of our model is that it provides quantifiable links between processing control parameters and pathogen levels, simplifying the complexity of these relationships for implementation into risk assessment models. We apply our model to *Escherichia coli* contamination on broiler carcasses, connecting pathogen control with chlorine sanitization, organic load in the water, and pre-chiller E. coli levels on the poultry. (Received September 15, 2014)