Seasonal prevalence of potentially positive non-O157 Shiga toxin-producing *Escherichia coli* (STEC) bovine hides and carcasses in Costa Rica

Chaves BD¹, Echeverry A¹, García LG¹, Todd Brashears M², Miller MF¹, Brashears MM³

¹Department of Animal and Food Sciences, Texas Tech University, Box 42141, Lubbock, TX 79409, USA; ²Department of Agricultural Education and Communications, Texas Tech University, Box 42131, Lubbock, TX 79409, USA; ³Department of Animal and Food Sciences, Texas Tech University, Box 42141, Lubbock, TX 79409, USA.

Abstract

The prevalence of potentially positive Shiga toxin-producing *Escherichia coli* (STEC) bovine hides and carcasses in three abattoirs in Costa Rica was estimated. Two export facilities (A and B) and one non-export establishment (C) were visited during the dry and rainy seasons of 2013. Swabs of hides pre-eviscerated and treated (180-220 peroxyacetic acid spray) carcasses were tested for the potential presence of STEC serogroups O26, O45, O103, O111, O121, and O145. The prevalence on hides during the rainy season was 86.7, 96.7 and 96.7% for facilities A, B, and C, respectively. During the dry season, the prevalence on hides was significantly lower in plants A and B (40% and 26.7%, respectively), but was marginally associated with the season in plant C (76.7%, P=0.0523). The prevalence of non-O157 STEC markers on treated carcasses was low (0 to 3.3%), suggesting that all plants were effective in minimizing the target non-O157 STEC in beef destined for export and for domestic consumption.

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