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Sabrina Bartz, Eduardo César Tondo, Mieke Uyttendaele

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Title

Microbiological quality and safety assessment of lettuce production in Brazil

Authors

Siele Ceuppens^{1,#}, Claudia Titze Hessel², Rochele de Quadros Rodrigues², Sabrina Bartz², Eduardo César Tondo², Mieke Uyttendaele¹

Affiliations

¹Ghent University, Faculty of Bioscience Engineering, Department of Food Safety and Food Quality, Laboratory of Food Microbiology and Food Preservation (LFMFP), Ghent, Belgium.

²Food Microbiology Laboratory of Food Science and Technology Institute (ICTA) of Federal University of Rio Grande do Sul (ICTA/UFRGS), Porto Alegre, Brazil.

#Corresponding author, email: mieke.uyttendaele@ugent.be, address: Coupure Links 653, 9000 Gent, phone: +329 264 61 78.

Keywords

lettuce, faecal indicators, *Salmonella*, *E. coli* O157:H7, irrigation water, organic fertilizer.

Abstract

The microbiological quality and safety of lettuce during primary production in Brazil was determined by enumeration of hygiene indicators *E. coli*, coliforms and enterococci and detection of enteric pathogens *Salmonella* and *E. coli* O157:H7 in organic fertilizers, soil, irrigation water, lettuce crops, harvest boxes and worker's hands taken from six different lettuce farms throughout the crop growth cycle. Generic *E. coli* was a suitable indicator for the presence of *Salmonella* and *E. coli* O157:H7, while coliforms and enterococci were not. Few pathogens were detected: 5 salmonellae and 2 *E. coli* O157:H7 from 260 samples, of which only one was lettuce and the others were manure, soil and water. Most (5/7) pathogens

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