

# ROLANDO A. FLORES

**Rank:** Full Professor

**Education:**

B.S.	Mechanical Engineering	Universidad de Costa Rica	1974
M.S.	Agricultural Engineering	Iowa State University	1981
Ph.D.	Grain Science	Kansas State University	1989

**Awards**

2008	Stanley Watson Award of the American Association of Cereal Chemists International
2012	USDA-ARS National Technology Transfer Award (team award)
2016	Water for Food Institute Faculty Global Fellow
2017	Kansas State University Department of Grain Science and Industry's Outstanding Alumni Award
2018	Kansas State University Alumni Fellow for the Graduate School Award

**Community Engagement**

Board member of the Arrowhead Center, Las Cruces, NM  
Board member of the American Association of Cereal Chemists International, St. Paul, MN  
Board member of Agriculture Future of America, Kansas City, MO  
Active member of the Institute of Food Technologists

**Previous positions (since terminal degree):**

2016 - present	Dean and Chief Administrative Officer, College of Agricultural, Consumer and Environmental Sciences. New Mexico State University, Las Cruces, New Mexico
2006 - 2016	Professor and Head, Food Science & Technology and Director, The Food Processing Center, University of Nebraska-Lincoln, Lincoln, Nebraska
2003 - 2006	Research Agricultural Engineer, USDA-ARS Eastern Regional Research Center, Crop Conversion Science and Engineering Research Unit, Wyndmoor, Pennsylvania
2001 - 2003	Research Food Technologist, USDA-ARS Eastern Regional Research Center, Microbial Food Safety Research Unit, Wyndmoor, Pennsylvania
1996 - 2001	Associate Professor, G. M. Ross Professorship, Tenured, Department of Grain Science and Industry, Kansas State University, Manhattan, Kansas
1994 - 1996	Associate Professor, Bioprocess Engineer, Department of Agricultural and Biosystems Engineering and Department of Food Science and Human Nutrition, Iowa State University, Ames, Iowa
1990 - 1993	Assistant Professor, Cooperative Extension Service, Department of Biological and Agricultural Engineering, Kansas State University, Manhattan, Kansas
1986 - 1990	Assistant Professor, Research Assistant, Graduate Research Assistant, Food and Feed Grains Institute and Department of Grain Science and Industry, Kansas State University, Manhattan, Kansas

**Research Area:**

Research is focused on the investigation byproduct utilization in food and non-food applications, dry fractionation methods to develop food value-added ingredients, process optimization, and modeling and computer simulation of food processes and unit operations used in the manufacturing of food, including water utilization and reconditioning in food processing operations and process risk modeling.

**Selected Publications:**

- Meneses, Y. E., J. Stratton and R. A. Flores. 2017. Water reconditioning and reuse in the food processing industry: Current situation and challenges. *Trends in Food Science & Technology*, 61: 72-79.
- Selani, M. M., A. Bianchini, W. Ratnayake, R. A. Flores, A. P. Massariolli, S. M. de Alencar, S. G. C. Brazaca. 2016. Physicochemical, functional and antioxidant properties of tropical fruits co-products. *Plant Foods for Human Nutrition*, 71(2), 137-144.
- Meneses, Y. E. and R. A. Flores. 2016. Whey- recovered water in CIP systems, its feasibility, safety and economic implications. A case study on water conservation for the dairy industry. *Journal of Dairy Science*, 99: 1-12.
- Meneses, Y. E., K. J. Canon, and R. A. Flores. 2014. Keys to Understanding and Addressing Consumer Perceptions and Concerns about Processed Foods. *Cereals Foods World*, 59(3): 141-146.
- Selani, M. M., S. G. C. Brazaca, C. T. dos Santos Dias, W. S. Ratnayake, R. A. Flores, and A. Bianchini. 2014. Characterization and potential application of pineapple pomace in an extruded product for fibre enhancement. *Food Chemistry*, 163:23-30.
- Doblado-Maldonado, A. F., R. A. Flores, and D. J. Rose. 2013. Low moisture milling of wheat for quality testing of wholegrain flour. *Journal of Cereal Grains*, 58(3): 420-423.
- Kyureghian, G., R. Flores. 2012. Meta-Analysis of Studies on Vitamin C Contents of Fresh and Processed Fruits and Vegetables. *Journal of Food Nutritional Disorders* 1:2.
- Rose, D. J., A. Bianchini, B. Martinez, and R. A. Flores. 2012. Methods for reducing microbial contamination of wheat flour and effects on functionality. *Cereals Foods World*, 57(3): 104-109.
- Silva, L.C., D. M. Queiroz, R.A. Flores and E. C. Melo. 2012. A simulation toolset for modeling grain storage facilities, *J. of Stored Products Research*, 48:30-36.
- Hicks, K. B., J. Wilson, and R. A. Flores. 2011. Progressive hull removal from barley using the Fitzpatrick comminuting mill. *Applied Engineering in Agriculture*, 27(5): 797-802.
- Griffey, C., Brooks, W., Kurantz, M., Thomason, W., Taylor, F., Obert, D., Moreau, R., Flores, R., Sohn, M., and Hicks, K. 2010. Grain composition of Virginia winter barley and implications for use in feed, food, and biofuels production, *Journal of Cereal Science*, 51: 41-49.
- Prasopsunwattana, N., M. Botero Omary, E A. Arndt, P. H. Cooke, R. A. Flores, W. Yokoyama, A. Toma, S. Chongcham, and S. P. Lee. 2009. Particle size effects on the quality of flour tortillas enriched with whole grain waxy barley. *Cereal Chemistry* 86 (4): 439-451.
- Toma, A., M. B. Omary, K. A. Rosentrater, E. A. Arndt, N. Prasopsunwattana, S. Chongcham, R. A. Flores, and S. P. Lee. 2008. Understanding Consumer Preference for Functional Barley Tortillas Through Sensory, Demographic, and Behavioral Data. *Cereal Chemistry* 85 (6): 721-729.
- Moreau, R. A., K. E. Wayns, R. A. Flores, and K. B. Hicks. 2007. Tocopherols and tocotrienols in barley oil prepared from germ and other fractions from scarification and sieving of hullless barley. *Cereal Chemistry* 84(6): 587-592.
- Flores, R. A., K. B. Hicks, and J. Wilson. 2007. Surface abrasion of hulled and hullless barley: Physical characterization of the milled fractions. *Cereal Chemistry* 84(5): 485-491.
- Ramírez-Wong, B., C. E. Walker, A. I. Ledesma-Osuna, P. I. Torres, C. L. Medina-Rodríguez, G. A. López-Ahumada, M. G. Salazar-García, R. Ortega-Ramírez, A. M. Johnson, and R. A. Flores. 2007. Effect of flour extraction rate on white and red winter wheat flour compositions and tortilla texture.

Cereal Chemistry 84(3): 207-213.

- Garcia, R. A., R. A. Flores, and C. E. Mazenko. 2007. Factors contributing to the poor bulk behavior of meat and bone meal and methods for improving these behaviors. Bioresource Technology 98: 2852-2858.
- Taylor, F., T. H. Kim, N. M. Goldberg, and R. A. Flores. 2007. Uniformity of distribution of anhydrous ammonia into shelled corn in a continuous ammoniator. Transactions of the ASABE 50(1): 147-152.
- Moreau, R. A., R. A. Flores, and K. B. Hicks. 2007. Composition of functional lipids in hulled and hullless barley in fractions obtained by scarification and in barley oil. Cereal Chemistry 84(1): 1-5.
- Silva, L. C., D. M. Queiroz, and R. A. Flores. 2006. Estimativa de custos operacionais em unidades armazenadoras de grãos por meio de simulação (Estimation of operational costs of grain storage facilities using computer simulation). Revista Brasileira de Armazenamento 31(1): 1-7.
- Garcia, R. A., K. A. Rosentrater, and R. A. Flores. 2006. Characteristics of North American meat and bone meal relevant to the development of non-feed applications. Applied Engineering in Agriculture 22(5): 729-736.
- Boateng, A. A., K. B. Hicks, R. A. Flores, and A. Gutsol. 2006. Pyrolysis of hull-enriched byproducts from the scarification of hulled barley (*Hordeum vulgare* L.). Journal of Analytical and Applied Pyrolysis 78: 95-103.
- Flores, R. A., M. L. Tamplin, B. S. Marmer, J. G. Phillips, and P. H. Cooke. 2006. Transfer Coefficient Models for *Escherichia coli* O157:H7 on Contacts between Beef Tissue and High Density Polyethylene Surfaces. Journal of Food Protection 69(6):1248-1255.
- Flores, R. A., K. B. Hicks, D. W. Eustace, and J. Phillips. 2005. High-starch and high-beta-glucan barley fractions milled with experimental mills. Cereal Chemistry 82(6):727-733.
- Rosentrater, K. A., T. L. Richard, C. J. Bern, and R. A. Flores. 2005. Small-scale extrusion of corn masa byproducts. Cereal Chemistry 82(4):436-446.
- Garcia, R. A., R. A. Flores, and J. G. Phillips. 2005. Use of an aspirator to separate meat & bone meal into high ash and high protein streams. Transactions of the ASAE 48(2): 703-708.
- Flores, R.A. and T. E. Stewart. 2004. Empirical distribution models for *Escherichia coli* O157:H7 in ground beef produced by a mid-size commercial grinder. Journal of Food Science 69(5):M121-6.
- Flores, R. A. 2004. Distribution of *Escherichia coli* O157:H7 in beef processed in a table-top bowl-cutter. Journal of Food Protection 67(2): 246-251.
- Kim, Y. S., R. A. Flores, O.K. Chung, and D.B. Bechtel. 2003. Physical and chemical characterization of wheat flour milling co-products. Journal of Food Process Engineering 26(5): 469-488.
- Yuan, J., R. A. Flores, D. Eustace, and G. A. Milliken. 2003. A systematic analysis of the break subsystems of a wheat flour pilot mill. Institution of Chemical Engineers, Trans. IChemE 81 (Part C): 170-179.
- Loza-Garay, M. and R. A. Flores. 2003. Moisture, ash and protein flow rate study in a wheat flour pilot mill using simulation models. Institution of Chemical Engineers, Trans. IChemE 81 (Part C): 180-188.
- Rosentrater, K. A., T. L. Richard, C. J. Bern, and R. A. Flores. 2003. Economic simulation modeling of reprocessing alternatives for corn masa byproducts. Resources, Conservation and Recycling 39(4):341-367.
- Lam, D. and R. A. Flores. 2003. Effect of particle size and moisture content on viscosity of fish feed. Cereal Chemistry 80(1): 20-24.
- Higiro, J., R. A. Flores, and P. A. Seib. 2003. Starch Production from Sorghum Grits. Journal of Cereal Science 37(1): 101-109.
- Flores, R. A. and M. L. Tamplin. 2002. Distribution Patterns of *Escherichia coli* O157:H7 in Ground Beef Produced by a Laboratory-Scale grinder. Journal of Food Protection 65(12): 1894-1902.