

**Nancy C. Flores, Ph.D., Associate Professor,
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Objectives:

Provide technical assistance to processors by analyzing potential opportunities for product development including market analysis and product placement. Develop a research program that will exploit opportunities leading to application by food processors.

Professional Preparation:

Institution	Major	Degree	Year
New Mexico State University	Animal Science	B.S.	1988
University of Missouri	Food Science and Nutrition	M.S.	1990
Kansas State University	Food Science	Ph.D.	2001

Appointments:

July 2008-current: Assoc. Professor Food Technology Extension, NMSU Las Cruces, NM
July 2001-2008: Assist. Professor Food Technology Extension, NMSU Las Cruces, NM
Aug. 1998-Dec 2000: Graduate Research Assistant, Kansas State University, Manhattan, KS
Aug 1997-1998: Food Prod. Devel. Lab Extension Assistant, KSU, Manhattan, KS
Nov. 1995-Aug. 1997: Food Tech. Extension Specialist with RAI-PAP, NMSU, Alcalde, NM
Aug. 1990-Nov. 1995: Food Safety Coordinator. Oscar Mayer Foods Corp., West Liberty, IA

Honors/awards/recognitions

Educator of the Year, New Mexico Organic Farming Conference. (February 2011). Recognition for workshops and educational programming for organic producers and processors

NMSU Campus Globalization Award- nominee, Office of International and Border Programs, (April 15, 2015) recognize the international engagement of NMSU faculty and staff.

External Funds obtained since 2001:

"IFSEEN - Integrating Food Science/Engineering and Education Network: A Partnership to Integrate Efforts and Collaboration to Shape Tomorrow's Hispanic Food Safety/Science Leaders", (Co-PI 2015-19) \$98,201.00
Utilization of Food Technology to Add Value to Cotton as a Food crop (PI: 2013-16) \$116,000
Better Process Control School for Agro-CAFTA in Guatemala (PI: 2011-12) \$31,000
Food Safety Instruction for Spanish-Speaking Meat Plant Operators (PI: 2008-10) \$101,229
Cochran Fellowship Training for Thai Food Safety Inspectors (PI: 2010) \$17,000
Cochran Fellowship Training for Iraqi Agriculturalists (2007-12; Co-PI) \$144,335
Crop Risk Management (2005; Co-PI) \$26,770
Crop Risk Assessment (2004; Co-PI) \$27,000
Small Acreage Farms Enlisting Good Agricultural Practices (PI: 2002) \$100,000
Enhancement Of Food Product Development Laboratory Resources (PI: 2002) \$12,500
Implementing the National Good Agricultural Practices Program by New Mexico Food Producers (CoPI: 2001-05) \$7,500

Engineering Technology (Mechanical) student project mentor:

- Evaluate two extruder systems for innovative snack products, 2 students, fall '13
- Evaluate heat distribution and utility at two local dehydration facilities, 2 students, fall '11
- Evaluate centrifuge and vacuum dehydration of Micro-greens project, 3 students, 08-09
- Evaluate frozen chile processing line project 4 students, spring '07
- Evaluate use chile chaff drying project, 4 students, fall '07
- Tortilla formulation project, 3 students, fall '07

Food science courses taught:

- Food Preservation special topics: A 2 ½ day intensive workshop hands-on course on various techniques of canning, dehydration and freezing specific to extension home economists.
- Food Preservation HNFS 331/531: course on food preservation including fermentation.
- Food Microbiology HNFS 320/520 course on the microbiological aspects of various foods.

Extension workshops and short courses:

- Artisan Cheese making workshop coordinator and presenter-
- Better Process Control School (BPCS) coordinator and presenter- English and Spanish
- Good Agriculture Practices (GAP's) program:
- FDA Food labeling public workshop
- Hazard Analysis Critical Control Point workshop
- Safe Process of Beef Jerky in Spanish
- FSMA HARPC Trainer
- PSA FSMA Trainer

Research projects:

Luo, Hongmei, Houston, Jessica P, Flores, Nancy, "IFSEEN - Integrating Food Science/Engineering and Education Network: A Partnership to Integrate Efforts and Collaboration to Shape Tomorrow's Hispanic Food Safety/Science Leaders".

Flores, Nancy, Luo, Hongmei, Houston, Jessica P "Application of nano-particles and flow cytometry to detect pathogenic Vibrio species in shrimp pond water",

Flores, Nancy, Luo, Hongmei, Houston, Jessica P, "Application of nano-particles to reduce nitrates in shrimp pond water",

Flores, Nancy, Cassandra Suther, Delgado, Efren "Characteristics of Jujube fruit",

Flores, Nancy, Lozano, Karen (UT-RGV) "Force spinning of glandless cottonseed meal protein",

Flores, Nancy, Robinson, Chadelle, "Market assessment of Jujube fruit at New Mexico farmers markets",

Flores, Nancy, Robinson, Chadelle, "Marketing placebo effects on new-to-market products: an experiment on jujube fruit",

Graduate and thesis advisor for the following:

Year	Degree	Name	Institution
IP	M.S.	Luisa Q. Valverde	NMSU
2015	Ph.D.	Dante Reyes	Instituto Tecnologico de Durango, Mexico
2015	Ph.D.	Vania Farias	Instituto Tecnologico de Durango, Mexico
2015	Ph.D.	Ricardo Navarro	Instituto Tecnologico de Durango, Mexico
2015	Ph.D.	Karla Ortega	Instituto Tecnologico de Durango, Mexico
2015	M.S.	Armando Covarrubias	NMSU
2014	M.S.	Mario Trillanes	NMSU
2012	Ph.D.	Damian Reyes-Jáquez	Instituto Tecnologico de Durango, Mexico
2010	M.S.	Jorge Beall	NMSU
2010	M.S.	Jorge Gonzalez- Simental	NMSU
2010	M.S.	Anna Zamora	NMSU

2007	M.S.	Kerri Cox	NMSU
2006	M.S.	Eilene Eichler	NMSU
2004	M.S.	Lori Neish	NMSU
2004	M.S.	Anne Pottenger	NMSU

Publications:

Journal articles and poster presentations:

Efren Delgado licon, E., Carrete-Carreón, F., Reyes-Jaquez, D., Flores, N.C., Medrano-Roldan, H., Diaz-Barboza, D.Y., (2016 submission) Nutritional value and ruminant acceptance of bean (*Phaseolus vulgaris* L.) silage fermented with molasses. *Animal Feed Science and Technology*. Submitted: December 2016.

Delgado Licon, E., Gamero-Barraza, M., Valles-Rosales, D. J., Flores, N., Medrano-Roldan, H., Reyes-Jaquez, D. Influence of lipid content and process parameters on the physicochemical, rheological and structural properties of an extruded canine feed. *International Journal of Science and Research (IJSR)*. Submitted: November 2016.

Valverde-Quiroz L., Lopez D., Flores N.C., Valles D., Munsun-Mcgee S., Delgado, E., Regnier E. 2016. Characterization and functional properties of glandless cottonseed meal poster presented at Institute Food Technologist Annual Conference.

Luisa Valverde-Quiroz, L., Flores, N.C. Delgado, E. (2015) Glandless cottonseed meal protein as a functional food ingredient. New Mexico Association of Family and Consumer Science Conference, New Mexico Association of Family and Consumer Science, Las Cruces, NM,

Lopez, D., Flores, N.C., Delgado, E..(2015) SDS-PAGE characterization of glandless cotton seed meal protein. New Mexico Association of Family and Consumer Science Conference, New Mexico Association of Family and Consumer Science, Las Cruces, NM,

Navarro-Cortez, R., Flores, N.C., Delgado, E. (2015) Preparation of a protein isolate from glandless cottonseed meal. Institute of Food Technologists Annual Meeting, Institute of Food Technologists, Chicago, IL,

Reyes-Jaquez, D., N. C. Flores, T. Wedegaertner and E. Delgado. Second generation snacks from mixtures of cottonseed meal and nixtamalized maize flours produced by single screw extrusion. AACCI Annual Conference, Providence, Rhode Island, U.S.A. October 5-8, 2014

Reyes-Jaquez, D., N. C. Flores, T. Wedegaertner and E. Delgado Utilization of food processing technology to develop healthy cotton seed meal extruded snacks. Advances in Food Processing conference São Paulo, Brazil from 5-7 November 2014.

Reyes Jáquez, D., Casillas, F., Flores, N.C., Cooke, P., Delgado, E., Solís Soto,A., Andrade González,I., Carrete Carreón, F.O., and H. Medrano Roldán (2014). Effect Of Glandless Cottonseed Meal Content On The Microstructure Of Extruded Corn-Based Snacks. *AFS* Vol. 36 (3) 8pgs.

Reyes-Jaquez, F. Casillas, N. C. Flores, I. Andrade-González, A. Solís-Soto, H. Medrano-Roldán, F. Carrete, E. Delgado. (2012). The effect of glandless cottonseed meal content and process parameters on the functional properties of snacks during extrusion cooking. *Food and Nutrition Sciences*.

Beall, JA, Fedio, W, Flores, NC, (2012). Enumeration, isolation and characterization of lactic acid bacteria from fermented chile pepper (*Capsicum annuum* cv. Mesilla Cayenne) mash. . Poster presentation at New Mexico Chile Conference, Las Cruces, NM.

Beall, JA, Gonzalez- Simental, JA, Soto-Navarro, S, Fedio, W, Flores, NC, (2010). The effect of calcium chloride on the microbial and physical characteristics of fermentation of chile pepper (*Capsicum annuum* cv. Mesilla Cayenne) mash. Poster presentation at International Chile Pepper Conference, Las Cruces, NM.

Gonzalez-Simental, JA, Flores, NC (2010). Develop and implement food safety instruction for Spanish speakers for the safe manufacture of jerky. Poster presentation at 2010 Reciprocal Meat Conference, Lubbock, TX.

Gonzalez- Simental, JA, Beall, JA, Soto-Navarro, S, Fedio, W, Flores, NC, (2010). The effect of calcium chloride on the physical characteristics of fermentation of chile pepper (*Capsicum annuum* cv. Mesilla Cayenne) mash. Poster presentation at July 2010 Institute of Food Technologist Annual meeting, Chicago, IL.

Beall, JA, Gonzalez- Simental, JA, Soto-Navarro, S, Fedio, W, Flores, NC, (2010). The effect of calcium chloride on the microbial characteristics of fermentation of chile pepper (*Capsicum annuum* cv. Mesilla Cayenne) mash. Poster presentation at July 2010 Institute of Food Technologist Annual meeting, Chicago, IL.

Zamora, AR, Flores NC, Zapata, R, Sotelo, CA, and Fedio, WM (2009). Rapid detection and isolation of *Salmonella* spp. from dried red chile powder. Poster presentation June, 2009 Institute of Food Technologist Annual meeting, Anaheim CA.

Flores, N.C., VanLeeuwen, D. and, Pennock, R.D. Jr., 2006. The effect of calcium on microbial quality and consistency of chile pepper (*Capsicum annuum* cv. Mesilla Cayenne) mash during fermentation. *Science and Technology/LWT*.

Silva E., and Flores, NC (2006). Assessment of postharvest pathogens and quality of red chile peppers during storage. 18th International Pepper Conference • May 21 - 23, 2006, Palm Springs, CA.

Silva E., and Flores, NC (2006). Assessment of postharvest pathogens and quality of red chile peppers during storage New Mexico Chile Conference, Las Cruces, NM, Feb 1, 2006

Eichler, E, and Flores, NC (2006). The effect of calcium on the consistency of chile pepper mash fermentation. Poster presented at NMSU Chile Conference. Feb. 2006, Las Cruces, NM.

Flores, N. C., Boyle, E.A. E., and Kastner, C. (2005). Instrumental and consumer evaluation of pork restructured with activa™ or fibrimex™ formulated with and without phosphate. *Science and Technology/LWT* available online 11/02/2005 at www.elsevier.com/locate/lwt.

McKee LH, Neish L, Pottenger A, Flores NC, Weinbrenner K, and Remmenga MD. (2005). Evaluation of consumable household products for decontaminating retail skinless boneless chicken breasts. *J. Food Protection* 68 (3): 534-37.

McKee LH, Flores NC, Neish L, Remmenga MD, Moore C, Pottenger A. (2003). Consumable household products for decontaminating retail skinless boneless chicken breasts. Poster Rocky Mountain Food Safety Conference. May 2003 Boulder, CO.

McKee LH, Flores NC, Neish L, Remmenga MD, Moore C, Pottenger A. (2003). Consumable household products for decontaminating pork loin chops. Poster Rocky Mountain Food Safety Conference. May 2003 Boulder, CO.

McKee LH, Flores NC, Neish L, Remmenga MD, Moore C, Pottenger A. (2003). Consumable household products for decontaminating retail beef steaks. Poster Rocky Mountain Food Safety Conference. May 2003 Boulder, CO.

McKee LH, Flores NC, Neish L, Remmenga MD, Moore C, Pottenger A. (2003). Consumable household products for decontaminating retail meats. Reciprocal Meat Conference June 2003 Columbia, MO.

Extension Publications:

Hanson, S. F., Beck, L. L., Flores, N., Heerema, R., Marsalis, M. A., Walker, S. *Fact Sheet - GMO Crops in New Mexico* (vol. Guide). Las Cruces, NM: Agricultural Experiment Station and Cooperative Extension Service, New Mexico State University.

Flores, N.C. Davies, C., Knight, K (2016) *Master Food Preservers* curriculum. Las Cruces, NM; Cooperative Extension Service, New Mexico State University.

Flores, N.C. (2016). *E-325: How to submit a commercial food product for process review*; revised document, Las Cruces: New Mexico State University. Updated.

Flores, N.C., Davies, C. (2015). *E-213: Using Pinto Beans*. Las Cruces: New Mexico State University. Updated.

Flores, N.C., Davies, C. (2015). *E-215: High-Altitude Cooking*. Las Cruces: New Mexico State University; revised.

Flores, N.C., Davies, C. (2015). *E-307: Home Canning of Vegetables*. Las Cruces: New Mexico State University; revised.

Flores, N.C., Davies, C. (2015). *E-308: Canning Green Chile*. Las Cruces: New Mexico State University; updated.

Flores, N.C., Davies, C. (2015). *E-319: Home Canning of Fruits*. Las Cruces: New Mexico State University; updated.

Flores, N.C., Davies, C. (2015). *E-321: Freezing Fruit Basics*. Las Cruces: New Mexico State University; updated.

Flores, N.C. Davies, C. (2015). *E-323: Salsa Recipes for Canning*. Las Cruces: New Mexico State University; revised.

Flores, N.C., Davies, C. (2015). *E-324 Processing Fresh Chile Peppers*. Las Cruces: New Mexico State University; revised.

Flores, N.C., Davies, C. (2015). *E-306: Preserving Tomatoes at Home*. Las Cruces: New Mexico State University; updated.

Flores, N.C., Davies, C. (2015). *E-311: Freezing Green Chile*. Las Cruces: New Mexico State University; revised.

Flores, N.C., Davies, C. (2015). *E-314: Make Jelly, Jam, and Spread at Home*. Las Cruces: New Mexico State University; updated.

Flores, N.C., Lillywhite, J. (2015). *E 510: Food Business in New Mexico*. Las Cruces. New Mexico State University; revised.

Flores NC, Lillywhite J, (2014; revised). E-510: Food Business in New Mexico. New Mexico State University; Cooperative Extension Service. 12 pgs.

Flores, N. (2013). Organic Good Agricultural Practices for New Mexico. New Mexico State University. Circular 666.

Flores, NC, (2008). How to submit a commercial food product for process review Guide E-325. New Mexico State University.

Flores, NC, (2007). E-308: Canning green chile. New Mexico State University; Cooperative Extension Service. 4 pgs.

Flores, NC. (2007) E-311: Freezing green chile. New Mexico State University; Cooperative Extension Service. 2 pgs.

Flores, NC. (2007). E-322: Drying foods. New Mexico State University; Cooperative Extension Service. 10pgs.

Flores NC, (2007). E-216: Making homemade cheese. New Mexico State University; Cooperative Extension Service. 8 pgs.

Flores NC, Lillywhite J, (2006.) E-510 (Spanish): El negocio de los alimentos en Nuevo México. New Mexico State University; Cooperative Extension Service. 16 pgs.

Flores, NC. (2005). E-321: Freezing fruit basics. New Mexico State University; Cooperative Extension Service. 4pgs.

Flores, NC. (2005). E-314: Make jelly, jam and spread at home. New Mexico State University; Cooperative Extension Service. 4pgs.

Flores, NC. (2005). E-306: Preserving tomatoes at home. New Mexico State University; Cooperative Extension Service. 4pgs.

Flores NC, Lillywhite J,(2005). E-510: Food Business in New Mexico. New Mexico State University; Cooperative Extension Service. 12 pgs.

Flores, NC. (2004). E-324 Processing fresh chile peppers. New Mexico State University; Cooperative Extension Service. 2pgs.

Agriculture Experiment Station reports:

Flores, NC 2014. Food technology enhancement of New Mexico specialty foods. HATCH report NM-1-5-27442.

Cox, K., Lillywhite, J.,Hadjigeorgalis, E. Flores, NC 2006. "Identifying needs of NM processors". Agriculture Experiment Station Report CAHE NMSU.

Pennock, RD Jr., Flores, NC, 2006. Good Agricultural Practices: What growers should know. New Mexico Chile Task Force Report No. 26. New Mexico State University.

Book chapters:

Bock, MA and Flores, NC 2006. Nutrition information related to battered and breaded products. In Kulp, K Ed: Batter and Breading. New York, NY: Marcel Dekker, Inc.