ANGELA M. SHAW PhD
Professor, Department of Animal and Food Science, Texas Tech University
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EDUCATION

2006-2010	**Ph.D. in Animal Science, emphasis in Food Microbiology** Department of Animal and Food Science, Texas Tech University Dissertation: Establishment of a pre-harvest spinach intervention against *Escherichia coli* O157:H7 using lactic acid bacteria.
2004-2006	**M.S. in Animal Science, emphasis in Meat Safety** Department of Animal Science (Meat Science), Iowa State University Thesis: Use of carbon monoxide combined with carbon dioxide for modified atmosphere packaging of pre- and post-rigor fresh pork sausage to improve shelf life.
1999-2003	**B.S. in Animal Science, emphasis in Product Development** Department of Animal Science, Iowa State University

CERTIFICATIONS

2016-Present	Lead Trainer for Produce Safety Alliance Grower Training
2016-Present	Trainer Food Safety Preventive Control Alliance Animal Food
2015-Present	Lead Trainer for Food Safety Preventive Control Alliance Human Food
2009-Present	Trainer Good Agricultural Practices/ Good Manufacturing Practices
2006-Present	Instructor Hazard Analysis Critical Control Point (HACCP)
2006-2019	ServSafe® through National Restaurant Association

PROFESSIONAL EXPERIENCE

2022-present	**Professor,** Animal and Food Science Department Texas Tech University, Lubbock TX Appointment:80% Research, 10% Teaching/Outreach; 10% Service
2022-present	**Affiliate Faculty,** Department of Food Science and Human Nutrition, Iowa State University, Ames, IA
2017-2022	**Associate Professor with Tenure,** Department of Food Science and Human Nutrition, Iowa State University, Ames, IA Appointment: 55% Research; 40% Extension; 5% Service
2011-2017	**Assistant Professor,** Department of Food Science and Human Nutrition, Iowa State University, Ames, IA Appointment: 60% Research; 40% Extension
2006-2011	**BSL2 Food Safety Pathogen Laboratory Manager,** Department of Animal and Food Science, Texas Tech University, Lubbock, TX
2010-2011	**Post-Doctoral Scholar,** Department of Animal and Food Science, Texas Tech University, Lubbock, TX
2006-2010	**Graduate Research/Teaching Assistant**, Department of Animal and Food Science, Texas Tech University, Lubbock, TX
2004-2006	**Graduate Research Assistant,** Department of Animal Science, Iowa State University, Ames, IA

Food Safety Expertise: Fruit, vegetable, meat, raw agricultural communities, and value added/manufacturing industries.

Countries Serviced Through Research and Extension: United States of America (including U.S. Virgin Islands and Puerto Rico), China, France, Mexico, Slovenia, Romania, Bhutan, Ethiopia, Uganda, and Burundi

PROFESSIONAL HONORS, AWARDS, RECOGNITIONS

2020	College of Agriculture and Life Sciences Dean Lee R. Kolmer Award for Excellence in Applied Research
2020	Iowa State University Extension and Outreach Excellence in Research-Based Programming Award (On Farm Produce Safety Team Award)
2020	College of Agriculture and Natural Resources Extension and Outreach Team Award (On Farm Produce Safety Team Award)
2020	2020 Women Impacting Iowa State University Calendar
2020	YWCA Women of Achievement Award
2019	Iowa State University Award for Inclusive Excellence
2018	College of Agriculture and Life Sciences Faculty Award for Diversity Enhancement
2017	Texas Tech University Advanced Degree Graduate of Distinction-Hall of Fame Award by Department of Animal and Food Sciences
2017	Women of Innovation Awards-Technology Association of Iowa Award Finalist
2016	Iowa State University Recognized as a "Change Agent"
2016	Iowa State University Extension and Outreach Creativity in Service to All Iowans Award
2015	Iowa Section Institute of Food Technologists Outstanding Volunteer
2013	Iowa Section Institute of Food Technologists Outstanding Volunteer
2011	Iowa STATEment Maker provided by Iowa State University Alumni Association

LEADERSHIP

Myers Briggs Type Indicator: ENFJ (Extraversion, Intuition, Feeling, Judging)
Korn Ferry 360 Feedback Report (Highest Skills): Managing diversity, Fairness to direct reports, Action Oriented, Perserverance, Time Management, Customer Focused, Integrity and trust, Ethics and values, Timely decision making, Organization, Intelletual horsepower, Process management, Drive for results, Priority setting, Planning, and Building an effective teams.

2016-Present	Project/ Co-Director of North Central Regional Food Safety Modernization Act Center (www.ncrfsma.org) -FDA/USDA Funded Center ($2.6 Mil)
2022-Present	Assistant Director of International Center for Food Industry Excellence at Texas Tech University
2015-2022	Lead of Strategic Area of Excellence Group "Community Health and Food Safety Education" in Department of Food Science and Human Nutrition at Iowa State University
2016-2022	Project Director of Iowa On-Farm Produce Safety Team (https://www.safeproduce.cals.iastate.edu/) -FDA and Iowa Department of Agriculture and Land Stewardship Funded Center ($1.2 Mil)

2019-2020	Lead 21 Program (Class of 15): provides leadership and professional development training for faculty and professionals within the land-grant system (https://lead-21.org/)
2017-2022	Co-Chair of Black Faculty and Staff Association at Iowa State University
2021-2022	Inaugural Chair of the Diversity, Equity, and Inclusion Committee for the International Association for Food Protection (IAFP)

See "Service and Outreach Section" for other current and past leadership and member position

SCHOLARLY PUBLICATIONS AND PRESENTATIONS

In-preparation Refereed Journal Articles (4)

1. Naig, A., Winn, S., Arendt, S., and **A. Shaw**. 2023. Consumer attitudes and expectations of restaurant COVID-19 mitigation practices concerning public health after year one of the COVID-19 pandemic
2. Ghosh, B., **Shaw, A.,** Boylston, T., and M. McDaniel. 2023. Persistence of *E. coli* in the soil environment – a review. Journal of Food Protection.
3. Ghosh, B., **Shaw, A.,** Boylston, T., and M. McDaniel. 2023. Influence of soil texture and nutrients on the survival of *E. coli* in midwest agricultural soils. Journal of Food Protection.
4. **Shaw, A.,** Akumu, G., Barrera, R., Ajata, L., Hernandez Guatemala, E.A., and B. F. Jovel Gonzalez. 2023. Survival of *E.coli* O157:H7 and *Salmonella* within home-based hydroponics units with sprouts.

Refereed Journal Articles (51)

1. Nabwiire. L.*, Shaw. A., Nonnecke. R.G., Talbert, J., and C.K. Muyanja. 2023. Compliance with food safety standards by beef vendors at butcheries in Kamuli District, Uganda. African Journal of Food Science. DOI: 10.5897/AJFS
2. Nabwiire, L.*, Shaw, A., Nonnecke, G.R., Talbert, J., Chanes, C., Boylston, T., Tarte, R., and K. Prusa. 2023. Beef handling practices among consumers in the U.S. Virgin Islands. Journal of Food Protection. 86(9): 100141. Doi: 10.1016/j.jfp.2023.100141
3. Cropp, M.**, Prusa, K., Dickson, J., Shaw, A., Houser, T., Crowley, R., Reever, L., and R. Tarte. 2023. Impact of nitrite-embedded packaging film on quality and sensory attributes of alternatively-cured and nitrite-free bologna. Meat Science. https://doi.org/10.1016/j.meatsci.2023.109289
4. Jackson-Davis, A., White, S., Kassama, L., Coleman, S., Shaw, A., Mendonca, A., Cooper, B., Thomas-Popo, E., Gordon, K, and L. London. 2023. A Review of Regulatory Standards and Advances in Essential Oils as Antimicrobials in Foods. Journal of Food Protection: 86 (2): 100025
5. Enderton, A., Shaw, A., Knob, A., Plagakis, E., Johnsen, E. Naig, A., and M. Omolo. 2022. Produce Safety Alliance Training Long Term Behavioral Change Study in North Central Region. Food Protection Trends: 43(3):316-328
6. Nabwiire, L.*, Shaw, A., Nonnecke, G., Minner, D., Johnsen, E., and L. Peterson. 2022. Cultural Sensitivity: A Requirement when Developing Food Safety Interventions. Journal of Extension: 60 (1). https://tigerprints.clemson.edu/joe/vol60/iss1/4/
7. Bhullar, M*, Perry, B*, Monge, A.*, Nabwiire, L.*, and **A. Shaw, A**. 2021. *Escherichia coli s*urvival on strawberries and unpacked romaine lettuce washed in contaminated water. Foods. https://www.mdpi.com/2304-8158/10/6/1390/htm

8. Nabwiire, L.*, Shaw, A., Nonnecke, G., Minner, D., Johnsen, E., and L. Peterson. 2021. Addressing food safety educational needs of food handlers in the U.S. Virgin Islands. Food Protection Trends: 41 (4): 400-408
9. Perry, B.*, Shaw, A., Enderton, A.E., Coleman, S.S., and E.E. Johnsen. 2021. North Central Region Produce Grower Training: Pre-Test and Post-Test Knowledge Change and Produce Safety Behavior Assessment. Food Protection Trends: 41 (3):266-273
10. Chen, H. **, Kinchla, A.J., Richards, N., Shaw, A., and Y. Feng. 2021. Produce Growers' On-Farm Food Safety Education: A Review. Journal of Food Protection: 84(4):704-716 DOI: 10.4315/JFP-20-320
11. Bhullar, M*, Shaw, A, Mendonca, A., Monge, A.*, Nabwiire, L.*, and E. Thomas-Popo. 2021. Shiga toxin producing *Escherichia coli* in the long-term survival phase exhibit higher chlorine tolerance and less sub-lethal injury following chlorine treatment of romaine lettuce. Foodborne Pathogens: 18(4):276-282
12. Eylands, N.J.**, Evans, M.R., and A. Shaw. 2021. Antimicrobial mitigation via saponin intervention on *Escherichia coli* and growth and development of hydroponic lettuce. Hort Tech: 31(2):174-180
13. Nazareth, J.*, **Shaw, A.,** Delate, K., and R. Turnbull. 2021. Food safety considerations in integrated organic crop-livestock systems: Prevalence of *Salmonella* spp., and *E.coli* O157:H7 in organically raised cattle and organic feed. *Renewable Agriculture and Food Systems*: 36(1): 8-16
14. Kiprotich, S.**, Mendonca, A.F., Dickson, J., **Shaw, A.,** Thomas-Popo, E., White, S., Moutiq, R., and S.A. Ibrahim. 2020. Thyme oil enhances the inactivation of Salmonella enterica on raw chicken breast meat during marination in lemon juice with added yucca schidigera extract. Frontiers in Nutrition, section Nutrition and Food Science Technology: 7: 619023
15. Bhullar, M.*, Monge-Brenes, A.*, Perry, B.*, Nabwiire, L.*, and A. Shaw. 2020. Determining the potential food safety risk associated with dropped produce on floor surfaces in the grocery store. Journal of Food Protection: 84 (2): 315-320.
16. Lorena Monge, A.*, Brown, W., Brecht, J.K., Xie, Y., Bornhorst, E.R., Luo, Y., Zhou, B., Shaw, A. and K. Vorst. 2020. Temperature profiling of open and closed produce display cases in retail grocery stores. Food Control: 113: 107158; https://www.sciencedirect.com/science/article/abs/pii/S0956713520300748
17. Bhullar, M.*, **Shaw, A.,** Hannan, J., and S. Andrews. 2020. Extending the holding time for agricultural water testing method EPA 1603 for produce growers. *Water:* 11 (10): 2020; **https://doi.org/10.3390/w11102020**
18. Thomas-Popo, E.**, Mendonca, A.F., Dickson, J., **Shaw, A.,** Coleman, S., Daraba, A.*, Jackson-Davis, A., and Woods, Floyd. 2019. Isoeugenol significantly inactivates *Escherichia coli* O157:H7, *Salmonella enterica,* and *Listeria monocytogenes* in refrigerated tyndallized pineapple juice with added Yucca schidigera extract. *Food Control*: 106 (December 2019, 106727)
19. Overdiep, J.*, and **A. Shaw**. 2019. Assisting Food Processors with Food Safety Modernization Act Compliance. *Journal of Extension*: 57 (3): 3TOT4
20. Gomez, C., Currey, C., Dickson, R., Kim, H., Hernández, R., Sabeh, N., Raudales, R., Brumfield, R., **Laury-Shaw, A.,** Wilke, A., and S. Burnett. 2019. Controlled Environment Food Production for Urban Agriculture. *HortScience:* 54 (9):1448-1458

21. Perry, B.*, **Shaw, A.,** Johnsen, E., Enderton, A., Strohbehn, C., and L. Naeve. 2019. Assessment of Midwest Growers' Needs for Compliance with The Food Safety Modernization Act Produce Safety Rule. *Food Protection Trends*: 39 (3):212-217
22. Strohbehn, C., Enderton, A., **Shaw, A.,** B. Perry*, Overdiep, J.* and L. Naeve. 2019. Determining what do Growers' Need to Comply with the FSMA Produce Safety Rule?. *Journal of Extension*: 56 (7):7RIB1
23. **Shaw, A.,** and K. Helterbran*. 2018. Development of a food safety training for prison farm: Challenges and opportunity. *Journal of Extension*: 56 (7):7IAW8
24. Vorst, K, Shivalingaiah, N.*, Monges Brenes, A.*, Coleman, S., Mendonca, A., Brown, J., and **A. Shaw**. 2018. Effect of Display Case Cooling Technologies on Shelf-Life of Beef and Chicken. Food Control 94: 56-64
25. **Shaw, A.,** Gragg, S.E., Echeverry, A., and M.M. Brashears. 2018. Survival of *Escherichia coli* O157:H7 after application of lactic acid bacteria. Journal of the Science of Food and Agriculture: doi: 10.1002/jsfa.9332
26. Wang, F.**, Mendonca, A., Brehm-Stecher, B., Dickson, J., Dispirito, A., and **A. Shaw**. 2018. Long-term-survival phase cells of Salmonella Typhimurium ATCC 14028 have significantly greater resistance to ultraviolet radiation in 0.85% saline and apple juice. *Foodborne Pathogens and Disease*: 15 (9):538-543
27. Eylands, N.J.**, Evans, M.R., and **A. Shaw**. 2018. Efficacy of Saponin Mitigation of *E.coli* under nonsterile and sterile conditions. HortScience 53 (9): S498-S498
28. Manu, D.**, A. Mendonca, A. Daraba*, J. Dickson, J. Sebranek, **A. Shaw**, and S. White. 2017. Antimicrobial efficacy of cinnamaldehyde against *Escherichia coli* O157:H7 and *Salmonella* enterica in carrot juice and mixed berry juices at 4C and 12C. Foodborne Pathogens and Disease 14(5):302-307. doi: 10.1089/fpd.2016.2214
29. Daraba, A.*, Mendonca, A., Manu, D., Dickson, J., Sebranek, J., **Shaw, A.,** and A. Dispirito. 2016. Enhanced destruction of *Salmonella enterica* in carrot and berry juices by a combination of cinnamaldehyde and high-pressure processing. *Journal of Experimental Food Chemistry*: 2:4 (supplement). http://dx.doi.org/10.4172/2472-0542.C1.006
30. Elumalai, E.D.*, **A. Shaw**, D.A. Pattillo, C. Currey, K.A. Rosentrater, and K. Xie. 2016. Use of ultraviolet treatment as a food safety intervention in a model aquaponics system. *Water* http://www.mdpi.com/2073-4441/9/1/27/pdf
31. Svoboda, A.*, **A. Shaw**, L. Wilson, A. Mendonca, A. Nair and A. Daraba*. 2016. The effects of produce washes on the quality and shelf life of "cantaloupe" (Cucumis melo var. cantupensis) and "watermelon" (Citrullus lantus var. lanatus). *Journal of Food Quality* DOI:10.1111/jfq.12229
32. **Shaw, A**., K. Helterbran*, M.M. Evans and C. Currey. 2016. Growth of Escherichia coli O157:H7, Non-O157 Shiga Toxin–Producing Escherichia coli, and Salmonella in Water and Hydroponic Fertilizer Solutions. Journal of Food Protection 79 (12):2179-2183.
33. Abdelmassih, K.N., S. Arendt, C.H. Strohbehn, L. Rajagopal, K. Sauer, and **A. Shaw.** 2016. Evaluating impact of food safety messaging posters on observed employees' food safety behavior: A mixed methods approach. *Journal of Foodservice Management and Education* 10 (2): 19-25
34. Rajagopal, L., S.W. Arendt, **A. Shaw**, C.H. Strohbehn, and K. Sauer. 2016. Food safety posters for safe handling of leafy greens. *Journal of Extension* 54 (2): 2TOT5.

35. Svoboda A.*, **A. Shaw,** J. Dzubak*, A. Mendonca, L. Wilson, and A. Nair. 2016. Effectiveness of broad-spectrum chemical produce sanitizers against foodborne pathogens on cantaloupe and watermelon surfaces. *Journal of Food Protection* 79 (4): 524-530.
36. Dzubak, J.*, **A. Shaw**, C. Strohbehn, L. Naeve, and J. Johnson***. 2016. Food safety education for students and workers in school gardens and university farms. *Journal of Extension* 54 (1): 1TOT7.
37. Roy, A.*, S. Francis, **A. Shaw**, and L. Rajagopal. 2016. Promoting Food Safety Awareness for Older Adults by Using Online Education Modules. *Journal of Extension* 54 (1): 1TOT8.
38. Roy, A.*, **A. Shaw**, L. Rajagopal, C. Strohbehn, S. Arendt, and K. Sauer. 2016. Use of minimal text posters to improve the microbial status of leafy greens and food contact surfaces in foodservice sites serving older adults. *Food Protection Trends* 36 (2): 123-130.
39. **Shaw, A**., J. Dzubak*, C. Strohbehn, and L. Naeve. 2016. Improving agricultural workers food safety knowledge through an online curriculum. *Professional Agricultural Workers Journal* 3 (2).
40. Myers, M.**, Sebranek, J., Dickson, J., **Shaw, A.**, Tarte, R., Adams, K, and S. Niebuhr. 2016. Implications of decreased nitrite concentrations on *Clostridium perfringens* outgrowth during an Appendix B cooling cycle for ready-to-eat-meats. *Journal of Food Protection* 79 (1): 153-156.
41. **Shaw-Laury, A.,** A. Svoboda *, B. Jie*, G. Nonnecke, and A. Mendonca. 2015. Survival of *Escherichia coli* on strawberries grown under greenhouse conditions. *Food Microbiology* 46: 200-203.
42. **Shaw A.**, A. Svoboda*, B. Jie*, A. Daraba* and G. Nonnecke. 2015. Importance of hand hygiene during the harvesting of strawberries. *HortTechnology* 25 (3):380-384.
43. **Shaw, A**., C. Strohbehn, L. Naeve, P. Domoto, and L. Wilson. 2015. Current trends in food safety practices for small growers in the Midwest. *Food Protection Trends* 35 (6):461-469.
44. **Shaw, A.,** A. Mendonca, A., and A. Daraba*. 2015. "Clickers" and HACCP: Educating a diverse food industry audience with technology. *Journal of Extension* 53 (6): 6TOT6.
45. **Shaw, A.**, C. Strohbehn, L. Naeve, P. Domoto, and L. Wilson. 2015. Systematic approach to food safety education on the farm. *Journal of Extension* 53 (6): 6IAW4.
46. **Shaw, A.**, C. Strohbehn, L. Naeve, P. Domoto, and L. Wilson. 2015. Knowledge gained from good agricultural practices courses for Iowa growers. *Journal of Extension* 53 (5): 5RIB3.
47. Hong, S., A. Mendonca, A. Daraba*, and **A. Shaw**. 2014. Radiation resistance and injury in starved *Escherichia coli* O157:H7 treated with electron-beam irradiation in 0.85% saline and in apple juice. *Foodborne Pathogens and Disease* 11(11): 900-906.

48. Brown, AL., JC. Brooks, E. Karunasena, A. Echeverry, **A. Laury**, and MM Brashears. 2011. Inhibition of *Escherichia coli* O157:H7 and *Clostridium sporogenes* in spinach packaged in modified atmospheres after treatment combined with chlorine and lactic acid bacteria. Journal of Food Science Jul 5 doi: 10.1111/j.1750-3841.2011.02260.x.
49. **Laury, A.**, MV. Alvarado, G. Nace, CZ. Alvarado, JC. Brooks, A. Echeverry and MM. Brashears. 2009. Validation of a lactic acid-based antimicrobial product for the reduction of E. coli O157:H7 and Salmonella on beef tips and whole chicken carcasses. Journal of Food Protection 72 (10): 2208-2211.

50. **Laury, A.** and J. Sebranek. 2007. Use of carbon monoxide combined with carbon dioxide for modified atmosphere packaging of pre- and post-rigor fresh pork sausage to improve shelf life. J. Food Protection 70 (6): 937-942.
51. Niebuhr S., **A. Laury**, G. Acuff, and JS. Dickson. 2007. Evaluation of nonpathogenic surrogate bacteria as process validation indicators for *Salmonella enterica* for selected antimicrobial treatments, cold storage, and fermentation in meat. Journal of Food Protection 71 (4): 714-718.

*Shaw Post-Doc, Graduate, or Undergraduate Student | ** Shaw on Graduate Student Committee

Refereed Extension Publications (47)

1. Bilenky, M.**, Nair, A., Shaw, A., and E. Bobeck. 2020. Integrating poultry into an organic vegetable cropping system: benefits, challenges, and considerations. HORT 3103. https://store.extension.iastate.edu/product/16041
2. Nabwiire, L.*, **Shaw, A.** and E. Johnsen. 2020. Reducing food safety risk on produce farm. FS 34. https://store.extension.iastate.edu/product/15826
3. Nabwiire, L.*, **Shaw, A.** and E. Johnsen. 2020. Reducing food safety risk on produce farm-Agricultural Water. FS 35A. https://store.extension.iastate.edu/product/15829
4. Nabwiire, L.*, **Shaw, A.** and E. Johnsen. 2020. Reducing food safety risk on produce farm-Cleaning and Sanitizing. FS 35 B. https://store.extension.iastate.edu/product/15830
5. Nabwiire, L.*, **Shaw, A.** and E. Johnsen. 2020. Reducing food safety risk on produce farm- Handwashing. FS 35 C. https://store.extension.iastate.edu/product/15831
6. Nabwiire, L.*, **Shaw, A.** and E. Johnsen. 2020. Reducing food safety risk on produce farm-Worker Hygiene and Health. FS 35 D. https://store.extension.iastate.edu/product/15832
7. Nabwiire, L.*, **Shaw, A.** and E. Johnsen. 2020. Reducing food safety risk on produce farm- Harvest and Post Harvesting Handling. FS 35 E. https://store.extension.iastate.edu/product/15833
8. Nabwiire, L.*, **Shaw, A.** and E. Johnsen. 2020. Reducing food safety risk on produce farm- Biological Soil Amendments of Animal Origin. FS 35 F. https://store.extension.iastate.edu/product/15834
9. Monge-Brenes, A.L.*, Velez, J.*, **Shaw, A.,** and K. Vorst. 2020. Stocking and rotation of produce: Best practices for retail employees. FS 37. https://store.extension.iastate.edu/product/16022
10. Monge-Brenes, A.L.*, Velez, J.*, **Shaw, A.,** and K. Vorst. 2020. Manager's responsibility: Employees reporting foodborne illness. FS 36A. https://store.extension.iastate.edu/product/16042
11. Monge-Brenes, A.L.*, Velez, J.*, **Shaw, A.,** and K. Vorst. 2020. Employee health and personal hygiene- Training for employees. FS 36B. https://store.extension.iastate.edu/product/16043
12. Monge-Brenes, A.L.*, Velez, J.*, **Shaw, A.,** and K. Vorst. 2020. Display case cleaning. FS 37B. https://store.extension.iastate.edu/product/16044
13. Monge-Brenes, A.L.*, Velez, J.*, **Shaw, A.,** and K. Vorst. Handwashing. 2020. FS 38. https://store.extension.iastate.edu/product/16045
14. **Shaw, A.,** Fillius, D., and E. Johnsen. 2020. On-Farm Training Guide for Employees and Volunteers. https://www.ncrfsma.org/training-guides

15. Overdiep, J., Johnsen, E., and **A. Shaw**. 2020. Federal and State Regulations on Selling Fermented Foods. FS 45. https://store.extension.iastate.edu/product/15964
16. Overdiep, J., Johnsen, E., and **A. Shaw**. 2020. Federal and State Regulations on Selling Jams and Jellies. FS 47. https://store.extension.iastate.edu/product/15966
17. Overdiep, J., Johnsen, E., and **A. Shaw**. 2020. Federal and State Regulations on Selling Frozen and Dehydrated Foods. FS 46. https://store.extension.iastate.edu/product/15965
18. Overdiep, J., Johnsen, E., and **A. Shaw**. 2020. Federal and State Regulations on Selling Pickled Vegetables. FS 48. https://store.extension.iastate.edu/product/15967
19. **Shaw, A**., Savits, J., Lewis Ivey, M., Andrews, A., and Overdiep, J. 2018. FSMA Summary for Hops Growers. FS 44. https://store.extension.iastate.edu/product/15926
20. **Shaw, A.,** Andrews, A., Coleman, S., Savits, J., Lewis Ivey, M., and Overdiep, J. 2018. Ensuring Food Safety: Wineries. FS 31. https://store.extension.iastate.edu/product/15671
21. **Shaw, A.,** Savits, J., Lewis Ivey, M., Andrews, A., and Overdiep, J. 2018. Ensuring Food Safety in the Vineyard: Table Grapes. FS 32. https://store.extension.iastate.edu/product/15676
22. **Shaw, A.,** Savits, J., Lewis Ivey, M., Andrews, A., and Overdiep, J. 2018. Ensuring Food Safety in the Vineyard: Wine Grapes. FS 33. https://store.extension.iastate.edu/product/15677
23. Strohbehn, C., Hannan, J., **Shaw, A.,** Naeve, L, and M. Bhullar. 2018. FS 30 Checklist for Retail Purchasing for Local Fresh Produce. https://store.extension.iastate.edu/product/Checklist-for-Retail-Purchasing-of-Local-Produce
24. Coleman, S., Andrews, S., Rajagopal, L, and **A. Shaw**. 2018. Cleaning a Walk-in Cooler. https://vimeo.com/user20353817/review/261890330/0e82d166e0
25. Coleman, S., Andrews, S., Rajagopal, L, and **A. Shaw**. 2018. Cleaning and Sanitizing Crates. https://vimeo.com/user20353817/review/261887089/4f9eb34403
26. Tocco, P., Strohbehn, C., and **A. Shaw**. 2018. Practical Record Keeping: A tool to aid growers in determination of qualified exemption and documentation. https://www.ncrfsma.org/files/page/files/ncr_exemption_worksheet_9x12_updated_2018_sales_numbers_front_page.pdf
27. Overdiep, J., Johnsen, E., Nwadike, L., Burrows, R., Garden-Robinson, J., and **A. Shaw**. 2018. Interactive quizzes are on the NCR website for those who make Value Added Products and wish to test their knowledge about FSMA requirements. https://iastate.qualtrics.com/jfe/form/SV_3DDy7C8ZVqgcj0V
28. Hultberg, A., Hedeen, L., Strohbehn, C., and **A. Shaw**. 2018. GAP training videos in Hmong (with English subtitles). https://www.youtube.com/channel/UCAkZq_Q_zWKpaa-ib04akFQ?view_as=subscriber
29. Andrews, S., Janke, A., Naeve, L., Burrows, R., Bhullar, M., and **A. Shaw**. 2018. FSMA Produce Safety Rule: Dealing with Wildlife. https://www.ncrfsma.org/files/page/files/ncr_wildlife_guidance_0.pdf
30. Bhullar, M., Naeve, L., Nwadike, L., and **A. Shaw**. 2018. FSMA Produce Safety Rule: Dealing with Domestic Animals. https://www.ncrfsma.org/files/page/files/ncr_domesticated_animals_factsheet.pdf
31. Bhullar, M., Andrews, A., and **A. Shaw**. 2018. FSMA Compliant On-Farm Thermophilic composting. https://www.ncrfsma.org/files/page/files/ncr_bsaao_final_0.pdf

32. Stull, K., Nwadike, L., Strohbehn, C., Lewis Ivey, M., Burrows, R., Garden-Robinson, J., Ilic, S., and **A. Shaw**. 2018. Farm Stand and U-Pick Produce Operations Safety Best Practices. https://www.ncrfsma.org/files/page/files/ncr_farm_stands_and_u_pick_guidance_0.pdf
33. Tocco, P., Strohbehn, C., and **A. Shaw**. 2018. Practical Record Keeping: Pre-Harvest Checklist. https://www.ncrfsma.org/resources-topic
34. Andrews, S., and **A. Shaw**. 2018. FSMA Produce Safety Rule Summary for Midwest Orchards. https://www.ncrfsma.org/files/page/files/ncr_orchard_guidance.pdf
35. **Shaw, A**., and E. Johnsen. 2018. Bodily Fluid Clean Up on the Farm. https://www.ncrfsma.org/files/page/files/ncr_bodily_fluid_clean_up_on_the_farm.pdf
36. Overdiep, J., and **A. Shaw.** 2017. FSMA Human Food Audit Checklist for Food Processors. https://ncrfsma.org/files/page/files/HumanFoodSafety%20for%20Processors_update_12_19_17.pdf
37. Strohbehn, C., Naeve, L., and **A. Shaw**. 2016. FS11 "Make Food Safety a Priority at Your CSA". https://store.extension.iastate.edu/product/Make-Food-Safety-a-Priority-for-Your-CSA
38. Strohbehn, C., Naeve, L., and **A. Shaw**. 2016. FS10 "Make Food Safety a Priority at Your Farmers Market Booth". https://store.extension.iastate.edu/Topic/Food-Nutrition-and-Health/Food-Safety.
39. **Shaw, A.,** C. Currey and M. Evans. 2015. Keeping your greenhouse fruits and vegetables safe: Part 1: Overview of practical best food safety practices. Greenhouse Grower.
40. **Shaw, A.,** C. Currey and M. Evans. 2015. Keeping your greenhouse fruits and vegetables safe: Part 2: Food safety in soilless and hydroponics systems. Greenhouse Grower.
41. **Shaw, A.,** C. Currey and M. Evans. 2015. Keeping your greenhouse fruits and vegetables safe: Part 3: Workers and biosecurity. Greenhouse Grower.
42. **Shaw, A.,** C. Currey and M. Evans. 2015. Keeping your greenhouse fruits and vegetables safe: Part 4: Sanitation. Greenhouse Grower.
43. Strohbehn, C., L. Rajagopal, S. Arendt, **A. Shaw**, K. Sauer. 2014. HS 007 "Leafy green safety handling posters".
44. **Shaw, A.,** C. Strohbehn, and S. Beattie. Revised 2014. SP0328. "Garden produce in floods". Iowa State University Extension Publication.
45. **Shaw A.,** C. Strohbehn, J. Meyer, H. Snyder*, L. Wilson, B. Brehm-Stecher, and A. Mendonca. 2013. PM 1974d. "Guide to using liquid sanitizer washes with fruits and vegetables". Iowa State University Extension Publication.
46. **Shaw A.**, C. Strohbehn, and J. Meyer.2013. PM1974e. "Food pantry produce donations". Iowa State University Extension Publication.
47. Strohbehn C, A. Mendonca, L. Wilson, P. Domoto, M. Smith, B. Brehm-Stecher, and **A. Shaw.** 2013. PM 1974c. "On-Farm food safety: cleaning and sanitizing guide". Iowa State University Extension Publication.

*Shaw Post-Doc, Graduate, or Undergraduate Student

Refereed Presentations (Presentation, Poster, and Abstracts) at Conferences (54)

1. Shaw, A. 2023. Food Safety within Controlled Environment: What we know and what research is needed. American Society for Horticulture Science. Oral Presentation. Orlando, Florida. August 3rd, 2023.

2. Nabwiire, L.*, **Shaw, A.**, Nonnecke, G., Talbert, J., and C. Muyanja. 2023. Compliance with Food Safety Standards By Beef Vendors at Butcheries in Kamuli District, Uganda. Poster Presentation. International Association for Food Protection Annual Conference. Toronto, Canada. July 18th, 2023.
3. Ghosh, B.*, **Shaw, A.,** Boylston, T., and M. McDaniel. 2023. What Affects the Survival of *E. coli* in Midwest Agricultural Soils?. Poster Presentation. International Association for Food Protection Annual Conference. Toronto, Canada. July 18th, 2023.
4. Kinchla, A., **Shaw, A.,** Brown, S., Fitzgerald, A., Johnston, L., and J. Williams. 2023. Work Smarter, Not Harder. Webinar. International Association for Food Protection. June 5th, 2023.
5. Estrada, E., Ge, M., Masters, Y., Kharel, K., Gutierrez Becerra, L., Cutter, C., Brashears, M.M., Robinson, L., and **A. Shaw**. 2022. Identity Matters: Building a More Inclusive Workplace for Women in Food Safety. Round Table. International Association for Food Protection Annual Conference. Pittsburgh, Pennsylvania. August 2nd, 2022.
6. Nabwiire, L.*, **Shaw, A.**, Nonnecke, G., Tarte R. and K. Prusa. 2022. Beef-Handling Practices of Consumers in the U.S. Virgin Islands. Technical Talk. International Association for Food Protection Annual Conference. Pittsburgh, Pennsylvania August 2nd, 2022.
7. Ozoh, C.*, and **A. Shaw**. 2021. Food-handling practices of active food delivery service users. Poster Presentation. International Association for Food Protection Annual Conference. 2021
8. Nabwiire, L.*, **Shaw, A.**, Nonnecke, G., Minner, D., Johnsen, E., and L. Petersen, 2020. Empowering the US. Virgin Islands food industry through food safety education. Poster Presentation. International Association for Food Protection Annual Conference. Virtual Conference. October 26th, 2020.
9. Ozoh, C.*, and **A. Shaw**. 2020. Food delivery service users' food handling practices. Oral Presentation. Partnership for Food Safety Education. September 21st, 2020. Virtual Conference.
10. Monge, A.*, Vorst, K., and **A. Shaw.** 2019. Effect of location and design of refrigerated display cases on temperature control of display cases. Poster Presentation. International Association for Food Protection Annual Conference. Louisville, Kentucky. July 23rd, 2019.
11. Bhullar, M.*, Monge, A.*, Perry, B.*, Nabwiire, L.*, and **A. Shaw**. 2019. Determining the potential food safety risks associated with dropped produce on floor surfaces in retail stores. Poster Presentation. International Association for Food Protection Annual Conference. Louisville, Kentucky. July 23rd, 2019.
12. Perry, B.*, Enderton, A., **Shaw, A.,** Hannan, J., Rajagopal, L., Johnsen, E.*, and S. Coleman. 2019. North Central Region Pre and Post Grower Training Knowledge Assessment. Poster Presentation. International Association for Food Protection Annual Conference. Louisville, Kentucky. July 22nd, 2019.
13. Bhullar, M.* and **A. Shaw**. 2018. Development of user-friendly *E.coli* water testing method for Iowa produce farmers to enhance food safety. Poster Presentation: International Association for Food Protection Annual Meeting. Salt Lake City, Utah. July 9th, 2018.
14. Perry, B.*, A. Enderton, C. Strohbehn, **A. Shaw,** and L. Naeve. 2018. Midwest Region Round Two Needs Assessment of FSMA Produce Safety Rule. Poster Presentation:

International Association for Food Protection Annual Meeting. Salt Lake City, Utah. July 9th, 2018.

15. **Shaw, A.,** S. Ilic, and M. Ivey. 2018. Food Safety Hydroponic Fruits and Vegetables- What We Do and Don't Know. Symposia. International Association for Food Protection Annual Meeting. Salt Lake City, Utah. July 9th, 2018.
16. Strohbehn, C., **A. Shaw**, and L. Naeve. 2017. The Impact of Online Modules on Farmers Market Vendors' and Managers' Knowledge about Good Agriculture Practices. Poster Presentation: 2017 National Extension Tourism Conference. Galveston, TX. August 9th, 2017.
17. Overdiep, J.*, **Shaw, A.,** Strohbehn, C., and L. Naeve. 2017. Development of a FSMA Preventive Controls for Human Food Rule Audit Checklist for Fruit and Vegetable Processors. Poster Presentation: International Association for Food Protection Annual Meeting. Tampa, FL. July 10th, 2017
18. Perry, B.*, Enderton, A., Strohbehn, C., **Shaw, A.,** and L. Naeve. 2017. North Central Region Produce Needs Assessment of FSMA Produce Safety Rule. Poster Presentation: International Association for Food Protection Annual Meeting. Tampa, FL. July 10th, 2017
19. Manu, D.**, Mendonca, A., Daraba, A.*, Dickson, J.S, Sebranek, J., **Shaw, A.**, and A DiSpirito. 2017. Cinnamaldehyde Enhances the Killing Effect of High-pressure Processing against *Escherichia coli* O157:H7 and *Salmonella Enterica* in Refrigerated (4°C) Carrot and Berry Juices. Poster Presentation: International Association for Food Protection Annual Meeting. Tampa, FL. July 11th, 2017
20. Mendonca, A., Manu, D.**, Wang, F. **, Daraba, A.* and **A. Shaw**. 2017. Antibacterial Efficacy of Geraniol against *Escherichia coli* O157:H7 and *Salmonella enterica* in Carrot Juice and a Mixed Berry Juice Held at 4°C. Poster Presentation: International Association for Food Protection Annual Meeting. Tampa, FL. July 11th, 2017
21. Wang, F.**, Mendonca, A., Daraba, A.*, Zhang, Y., Manu, D.*, **Shaw, A.,** and B. Brehm-Stecher. 2017. Influence of Desiccation on Survival and Dry-heat Resistance of Long-term-survival Phase Salmonella Typhimurium and Salmonella PT 30 on Paper Discs and Raw Almonds. Poster Presentation: International Association for Food Protection Annual Meeting. Tampa, FL. July 11th, 2017
22. **Shaw, A,** R. McGorrin, D. Reed, C. Callan, and M. Danyluk. 2017. National and Regional FSMA Training Centers: Application of Lessons Learned. Round table Oral Presentation: International Association for Food Protection Annual Meeting. Tampa, FL.
23. **Shaw, A,** Oyarzabel, O., Deng, K., and J. Rogers**.** 2017. Tools to Improve Interactive Food Safety Training for Small Food Facilities. Oral Presentation: International Association for Food Protection Annual Meeting. Tampa, FL. July 10th, 2017
24. Arendt, S., K. Sauer, C. Strohbehn, L. Rajagopal, and **A. Shaw.** 2017. Handling of Leafy Greens in Foodservice Operations Serving Older Americans Before and After Intervention. Consumer Food Safety Education Conference. Washington, DC
25. Daraba, A.*, Mendonca, A., Manu, D., Dickson, J. S., Sebranek, J., **Shaw, A.** and A. DiSpirito. 2016. Enhanced destruction of Salmonella enterica in carrot and berry juices by a combination of cinnamaldehyde and high-pressure processing. Poster Presentation: Global Food Safety Conference. San Antonio, TX.
26. Strohbehn, C., L. Rajagopal, Arendt, S., K. Sauer, **A. Shaw,** A. Roy, and K. Abdelmassih. 2016. Assessing food safety messages impacting foodservice workers' handling of leafy

greens in facilities serving the elderly. Latin American Food Safety Conference. Cancun, Mexico.

27. Strohbehn, C., **Shaw**, **A**. and L. Naeve. 2015. Minimizing food safety risk at the farmer's markets through online education for producer vendors and market managers. Poster Presentation: 2015 National Extension Tourism Conference. Galveston, TX.
28. Dzubak, J.*, **Shaw, A.**, Strohbehn, C., and L. Naeve. 2015. Food safety for students in school garden. Poster Presentation: School Nutrition Association. Salt Lake City, UT.
29. Manu, D.**, Mendonca, A., Wang, F.**, Daraba, A.* and **A. Shaw**. 2015. Antibacterial effectiveness of cinnamaldehyde against *Escherichia coli* O157:H7 and *Salmonella enterica* in carrot and blackberry juice blends held at 4°c. Poster Presentation: International Association for Food Protection Annual Meeting. Portland, OR.
30. **Shaw, A**., Strohbehn, C., Wilson, L., Naeve, L. and P. Domoto. 2015. Assessment of food safety practices for small scale fruit and vegetable growers in the Midwest. Poster Presentation: International Association for Food Protection Annual Meeting. Portland, OR.
31. Rajagopal, L., Arendt, S., Sauer, K., Strohbehn, C. and **A. Shaw**. 2015. Development of visual tools for training foodservice workers about safe handling of leafy greens. Poster Presentation: Foodservice Systems Management Education Council. Memphis TN.
32. Rajagopal, L., Arendt, S., Sauer, K., Strohbehn, C. and **A. Shaw**. 2015. Development and evaluation of visual-based tools for training foodservice workers about safe handling of leafy greens using a multi-pronged approach. Poster Presentation: International Association for Food Protection Annual Meeting. Portland, OR.
33. Daraba, A.*, Drummer, J., Mendonca, A. and **A. Shaw**. 2015. Effectiveness of PRO-SAN, a biodegradable antimicrobial, for killing *Salmonella* enterica and *Escherichia coli* O157:H7 on parsley and green onions used as fresh garnishes. Poster Presentation: International Association for Food Protection Annual Meeting. Portland, OR.
34. Roy, A.*, **Shaw, A.**, Rajagopal, L., Strohbehn, C., Arendt, S. and K. Sauer. 2015. Evaluation of intervention using microbial assessment of leafy greens and leafy greens contact surfaces in foodservice operations. Poster Presentation: Institute of Food Technologists. Chicago, IL.
35. **Shaw, A.** and C. Strohbehn. 2014. Effective online food safety education for school gardens and university farms. 2014 Consumer Food Safety Education Conference-Together: A Food Safety America. Washington D.C.
36. Svoboda, A.* and **A. Shaw.** 2014. Effectiveness of broad-spectrum chemical intervention treatments against foodborne pathogens on artificially inoculated cantaloupe and watermelon. Oral Presentation. International Association for Food Protection Annual Meeting. Indianapolis, IN.
37. **Shaw, A**., Rajagopal, L., Strohbehn, C., Sauer, K., and S. Arendt. 2014. Microbial assessment of leafy greens and leafy greens contact surfaces in retail foodservice operations. Poster Presentation: International Association for Food Protection Annual Meeting. Indianapolis, IN.
38. **Shaw, A.**, Svoboda, A.*, Mendonca, A. and S. Jung. 2014. Search for a natural intervention against *L. monocytogenes* in Wheatgrass Juice. Poster Presentation: International Association for Food Protection Annual Meeting. Indianapolis, IN.

39. Dzubak, J.*, **A. Shaw**, C. Strohbehn and L. Naeve. 2014. Development of an online food safety training for school gardens. Poster Presentation: International Association for Food Protection Annual Meeting. Indianapolis, IN.
40. Paik, S., Mendonça, A., Daraba, A.* and **A. Shaw**. 2014. Effect of starvation on resistance of *Escherichia coli* O157:H7 to ultraviolet radiation in 0.85% saline and in apple juice. Poster presentation: Institute of Food Technologists Annual Meeting. New Orleans, LA.
41. Daraba, A.*, Mendonca, A., **Shaw**, **A.** and D. Manu. 2014. Viability of *Salmonella enterica* and *Escherichia coli* O157:H7 on romaine lettuce following repeated immersion in sanitizers with or without added exudate. Poster Presentation: Institute of Food Technologists Annual Meeting. New Orleans, LA.
42. Daraba, A.*, Adiwijaya, Z., **Shaw**, **A.** and A. Mendonça. 2014. Effectiveness of PROSAN, a biodegradable vegetable wash, for killing *Salmonella enterica* and *Escherichia coli* O157:H7 on the surface of whole cucumbers. Poster Presentation: United Fresh Produce Association, S-294 Science Symposium. Chicago, IL.
43. Svoboda A.* and **A. Shaw.** 2013. Effectiveness of chemical intervention treatments against *E. coli* O157:H7, Non-O157 STEC, *Listeria monocytogenes*, and *Salmonella*. Poster Presentation: International Food Protection Annual Meeting.
44. **Laury, A.,** Fermin, K., Stull, D., Neuber, A., Chance Brooks, J., Brashears, T., Alvarado, C. and MM. Brashears. 2011. Reduction of methicillin-resistant *Staphylococcus aureus* (MRSA) on towels utilizing targeted directional microwave technology. Poster: General Meeting of the American Society for Microbiology.
45. **Laury, A.,** Fermin, K., Stull, D., Neuber, A., Chance Brooks, J., Brashears, T., Alvarado, C. and MM. Brashears. 2011. Re-distribution of methicillin-resistant *Staphylococcus aureus* (MRSA) during the laundering of cotton towels. Poster: General Meeting of the American Society for Microbiology.
46. **Laury, A.,** Fermin, K., Stull, D., Neuber, A., Chance Brooks, J., Brashears, T., Alvarado C. and MM Brashears. 2011. Reduction of *Salmonella* on jalapeño peppers, peanuts, and dry dog food utilizing targeted directional microwave technology. Poster: Conference of International Food Protection Annual Meeting.
47. **Laury, A.,** Echeverry, AE., Gragg, SE., Alvarado, MA., Brown, AL., Narvaez-Bravo, C., Sunkara, P. and MM. Brashears. 2010. Electrostatically sprayed lactic acid bacteria as a pre-harvest intervention strategy for reduction of *Escherichia coli* O157:H7 on spinach plant. Poster: Conference of International Food Protection Annual Meeting.
48. Echeverry, AE., Miller, MF., Jackson, T., **Laury**, **A.,** Narvaez-Bravo, C., Chaney, WE., Brown, AL., Sunkara, P., Pond, AR. and MM. Brashears. 2010. In-Plant validation of hot water wash and lactic acid as interventions to control microbial pathogens in beef carcasses as part of a HACCP reassessment plan. Poster: Reciprocal American Meat Science Association.
49. **Laury, A.**, Alvarado, MA., Brooks, JC. and MM. Brashears. 2009. Inhibition of *Escherichia coli* O157:H7 and *Salmonella* in ground beef using modified atmosphere packaging systems. Poster: Reciprocal American Meat Science Association.
50. **Laury, A.** and MM. Brashears. 2009. Survival of lactic acid bacteria in various water sources and sandy loam soil. Poster: International Food Protection Annual Meeting.
51. **Laury, A.**, Alvarado, MV., Nace, G., Brooks, JC. and MM. Brashears. 2008. Evaluation of the reduction of *E.coli* O157:H7 and *Salmonella* spp. by spraying a lactic acid based

antimicrobial product (Beefxide®) on USDA select beef tips. Poster: International Food Protection Annual Meeting.

52. **Laury, A.,** Loneragan, G., Platt, T., Branham, L., Ives, S., Engler, M., Thompson, D. and MM. Brashears. 2006. Changes in indicator populations due to therapeutic use of injectable antibiotics in feedlot cattle. Poster: International Food Protection Annual Meeting.
53. **Laury, A.,** and J. Sebranek. 2006. Use of carbon monoxide combined with carbon dioxide for modified atmosphere packaging of fresh pre-rigor pork sausage to improve shelf life. Poster: International Food Protection Annual Meeting.
54. **Laury, A.,** and J. Sebranek. 2006 .Evaluation of modified atmosphere packaging with carbon monoxide and carbon dioxide for fresh pre-rigor pork sausage and fresh post-rigor pork sausage. Poster: Reciprocal American Meat Science Association.

*Shaw Post-Doc, Graduate, or Undergraduate Student

Non-Refereed Presentations (Presentation, Poster, and Abstracts) at Conferences (36)

1. Johnsen E. and **A. Shaw**. 2023. Update for North Central Region Center for Training, Extension, and Technical Assistance. FSOP Project Director Meeting, Orlando, Florida. May 2023
2. **Shaw, A.** and E. Johnsen. 2023. Update for North Central Region Center for Training, Extension, and Technical Assistance. Western FSMA Center Meeting. Prosser, WA. May 2023
3. **Shaw, A.** and E. Johnsen. 2023. Update for North Central Region Center for Training, Extension, and Technical Assistance. Southern Region Annual Conference. Savannah, Georgia. January 2023.
4. Johnsen, E. and **A. Shaw**. 2023. Update for North Central Region Center for Training, Extension, and Technical Assistance. Northeast FSMA Center. Boston, Massachusetts. January 2023.
5. Johnsen, E. and **A. Shaw**. 2023. Update for North Central Region Center for Training, Extension, and Technical Assistance. Southern Region Annual Conference. Eau Claire, Wisconsin. March 2023.
6. Johnsen, E.* and **A. Shaw**. 2022. Update for North Central Region Center for Training, Extension, and Technical Assistance. Western FSMA Center Meeting. New Mexico. May 2022
7. **Shaw, A.** and E. Johnsen*. 2022. Update for North Central Region Center for Training, Extension, and Technical Assistance. FSOP Project Director Meeting, Orlando, Florida. May 2022
8. Johnsen, E.* and **A. Shaw**. 2022. Update for North Central Region Center for Training, Extension, and Technical Assistance. Northeast FSMA Center. Virtual. January 2022.
9. Johnsen, E.* and **A. Shaw**. 2022. Update for North Central Region Center for Training, Extension, and Technical Assistance. Southern Region Annual Conference. Virtual. January 2022.
10. **Shaw, A.,** Enderton, A. and E. Johnsen*. 2021. North Central Region Center for FSMA Training, Extension, and Technical Assistance: Impact of Produce Safety Alliance Grower Trainings in the North Central Region. National Association for State Department of Agriculture National Consortium for Food Safety. Virtual. December 7th-10th, 2021

11. Johnsen, E.*, and **A. Shaw**. 2021. NCR FSMA Expectations for FSOP Awardees. USDA Food Safety Outreach Program Grant Kickoff Webinar for FY 2021 FSOP Awardees. October 19th, 2021
12. Hannan, J., **Shaw, A.,** Rajagopal, R. Enderton, A., and E. Johnsen*. 2020. Update for North Central Regional Center for Training, Extension, and Technical Assistance. National Association for State Department of Agriculture National Consortium for Food Safety. Virtual. December 9th-11th, 2020
13. Hannan, J., **Shaw, A.,** Rajagopal, R. Enderton, A., and E. Johnsen*. 2020. Update for North Central Regional Center for Training, Extension, and Technical Assistance. Food Safety Outreach Program Directors Meeting. Virtual. August 18th-19th, 2020
14. Hannan, J., **Shaw, A.,** Naig, A., and A. Enderton. 2020. Update for North Central Region Center for Training, Extension, and Technical Assistance. Western FSMA Center Meeting. Virtual. May 2020
15. Hannan, J., Shaw, A., Naig, A., and A. Enderton. 2020. Update for North Central Region Center for Training, Extension, and Technical Assistance. NDFMGA and Local Foods Conference. Bismark, North Dakota. February 2020.
16. **Shaw, A.,** Hannan, J., Naig, A., and A. Enderton. 2020. Update for North Central Region Center for Training, Extension, and Technical Assistance. Northeast FSMA Center Legal Meeting. Boston, Massachusetts. February 2020.
17. **Shaw, A**. 2020. Advanced Produce Safety Alliance Training. Southern Region Integrated Produce Safety Conference. January 28th-February 1st, 2020. Florida
18. Johnsen, E.*, **Shaw, A.,** Hannan, J., Naig, A., and A. Enderton. 2020. Update for North Central Region Center for Training, Extension, and Technical Assistance. Southern Region Annual Conference. Savannah, Georgia. January 2020.
19. Bhullar, M.* and **A. Shaw**. 2019. Retail Produce Safety Drop. North Central Regional Center FSMA Annual Conference. Indianapolis, Indiana. June 10-12th, 2019
20. Hannan, J., **Shaw, A.,** Rajagopal, R. Enderton, A., and E. Johnsen*. 2019. Update for North Central Regional Center for Training, Extension, and Technical Assistance. Western FSMA Center Meeting. Portland, Oregon. May 21st, 2019
21. **Shaw, A.,** Hannan, J., Rajagopal, R. Enderton, A., and E. Johnsen*. 2019. Update for North Central Regional Center for Training, Extension, and Technical Assistance. Oral Presentation: NECEF Meeting. Albany, New York. February 4-6th, 2019
22. **Shaw, A.** 2019. FSMA Produce, Processing, and Holding. Oral Presentation: Ohio Produce Network. Dublin, Ohio. January 15-16th, 2019.
23. Bhullar, M.* and **A. Shaw**. 2019. Retail Produce Safety Drop. Poster Presentation: North Central Regional Center FSMA Annual Conference. Indianapolis, Indiana. June 10-12th, 2019
24. **Shaw, A,** Hannan, J., Rajagopal, R. Enderton, A., and E. Johnsen*. 2018. Update for North Central Regional Center for Training, Extension, and Technical Assistance. Oral Presentation. USDA Food Safety Outreach Program Regional Director Meeting. Blacksburg, Virginia. August 20-22nd, 2018.
25. **Shaw, A,** Hannan, J., Rajagopal, R. Enderton, A., and E. Johnsen*. 2018. Update for North Central Regional Center for Training, Extension, and Technical Assistance. Southern Region Integrated Produce Safety Conference. Atlanta, Georgia. November 13-14th, 2018.

26. **Shaw, A,** Hannan, J., Rajagopal, R. Enderton, A., and E. Johnsen*. 2018. Update for North Central Regional Center for Training, Extension, and Technical Assistance. Local Foods Conference. Brookings, South Dakota. November 1-2nd, 2018.
27. Mendonça, A., Daraba, A.*, Woods, F., **Shaw**, **A.,** Ortiz, A., and G. Rodriguez. 2016. Effect of PRO-SAN, a Biodegradable Vegetable Wash, on Pathogen Viability and Selected Quality Characteristics in Fresh Basil and Cilantro. Poster presentation: United Fresh Produce Association, S-294 Science Symposium. Chicago IL
28. **Shaw, A.** 2016. Impact of Food Safety Modernization Act on the Grains Industry. GEAPS and Grain Journal, Webinar.
29. **Shaw, A.** 2016. Food Safety Concerns in Hydroponics Production. State Fruit and Vegetable Field Day. University of Arkansas. Rodgers, AR, Webinar
30. **Shaw, A**. 2014. Food safety in bulk grains: Developing food safety and recordkeeping plans. USDA ARS Soft Wheat Quality Laboratory 60th Research Review Conference. Wooster, OH.
31. **Shaw, A.** 2014. Food Safety Modernization Act. Opening Workshop. GEAPS. Omaha, NE.
32. **Shaw, A.** 2013. Food Safety Modernization Act and production impact on suppliers. Rousselot Inc. & Sonac USA. Denver, CO.
33. **Shaw, A.** 2013. Food safety in production environment. Midwest Poultry Association. Minneapolis, MN.
34. **Shaw, A.** 2012. Assessment of basic food safety knowledge by farmer market participants. International Food Protection Association Annual Meeting. Providence, RI.
35. **Shaw, A.** 2012. Ohio State University short course on fresh produce safety- "Regulatory Issues". OSU, Department of Food Engineering. Columbus, OH.
36. **Shaw, A.** 2012. Creating food safety and recordkeeping plans for the Food Safety Modernization Act. GEAPS Exchange 2012. Minneapolis, MN.

*Shaw Post-Doc, Graduate, or Undergraduate Student

Book Chapters (1)

1. **Laury, A.,** A. Echeverry and MM Brashears. 2009. Fate of Escherichia coli O157:H7 in Meat, p. 31-53. In Fidel Toldra (ed.), Safety of Meat and Processed Meat. Springer Science, New York.

Invited Research and Extension Presentations (37)

1. **Shaw, A.** FDA Products: Research and Outreach. May 17th, 2023. Tyson Foods.
2. **Shaw, A.** Produce Safety. Virtual Presentation. February 15, 2023 Virtual Texas Food Safety & Defense Task Force Meeting. 125 participants
3. Shaw, A. CEA Food Safety What we know and should know?. March 6th, 2023. Virtual Presentation. USDA ARS Beltsville. 25 participants
4. **Shaw, A.** May 28th 2020. From Local Favorites to Corporate Chains Retail food industry, how has COVID-19 changed food safety?. Virtual Educational Series by RCA Powered Up
5. **Shaw, A.** 2018. Food Safety on the Farm. St. Thomas US Virgin Islands.
6. **Shaw, A.** 2018. Food Safety on the Farm. St. Croix US Virgin Islands.
7. **Shaw, A,** Hannan, J., and M. Bhullar. 2017. Update on FSMA Regulations. Iowa State University's annual Fruit and Vegetable Field. Ames, IA.

8. Andrews, A., Wiemerslage, T., and **A. Shaw.** 2017. Update in Food Safety Research. 17th Annual Iowa Organic Conference. Iowa City, IA.
9. **Shaw, A.** 2017. U.S. food laws for meat, poultry, seafood, and non-protein foods 2017 Food and Human Health Symposium. Dalian Polytechnic University. Dalian, China. June 2017
10. **Shaw, A.** 2017. Produce Sanitizer and FSMA Update. Illinois Specialty Crop Conference. Springfield, IL
11. **Shaw, A.** 2016. Update in Food Safety Research.16th Annual Iowa Organic Conference. Iowa City, IA.
12. **Shaw, A.** 2016. Update on Food Safety Modernization Act regulations. Iowa Fruit and Vegetable Growers Association Annual Conference. Ankeny, IA.
13. **Shaw, A.** 2016. Food Safety Rules in the United States. The conference theme is "Enhancing Quality and Safety of Livestock and Livestock Products. Ethiopian Society of Animal Production annual conference. Addis Ababa, Ethiopia.
14. **Shaw, A.** 2015. Food Safety Modernization Act: Overview. Iowa Department of Inspection and Appeals. Cedar Rapids, IA.
15. **Shaw, A.** 2015. Food Safety Modernization Act: Qualified Individuals. Eurofins. Ankeny, IA.
16. **Shaw, A.** 2015. Farmers Market Food Safety Online Program. Iowa Farmers Market Association Annual Conference. Des Moines, IA.
17. **Shaw, A.** 2015. Update on FSMA Regulations. Iowa Fruit and Vegetable Growers Association Annual Conference. Ankeny, IA.
18. **Shaw, A.** 2014. Update in Food Safety Research.14th Annual Iowa Organic Conference. Iowa City, IA.
19. **Shaw, A.** 2014. Impact of new food safety regulations on your farm. Women Food & Ag Network Conference. Fairfield, IA.
20. **Shaw, A**. 2014. Food safety in the U.S. International Agricultural Trade and Food Safety Professional. Ames, IA.
21. **Shaw, A.** 2014.Traceability and biosecurity. Iowa Fruit and Vegetable Growers Association Annual Conference. Ankeny, IA.
22. **Shaw, A.** 2013. Food Safety Modernization Act impact to milk producers. Iowa Dairy Association. Des Moines, IA.
23. **Shaw, A.** 2013. Food safety farm to school. Farm to School Collaboration-Planting Seeds for Growth. Lake Iowa Nature Center. Ladora, IA.
24. **Shaw, A.** 2013. FSMA and on farm food safety. Midwest Aronia Association Annual Conference. West Des Moines, IA.
25. **Shaw, A.** 2013. Food safety training workshop. General Mills. Ankeny, IA.
26. **Shaw, A.** 2013. Food safety update: Risk and consequences. Iowa Fruit and Vegetable Growers Association Annual Conference. Ankeny, IA.
27. **Shaw, A.** 2012. Food Safety Modernization Act impact on local foods. Putting the Pieces Together: Building Partnerships in the Iowa Food System Conference. Ames, IA.
28. **Shaw, A.** 2012. From the perspective of bacteria—issues associated with toxicology, Toxicology Program Welcome and Orientation speaker. Ames, IA.
29. **Shaw, A.** 2012. On-Farm food safety risks. Local Food System Conference. Indian Hills, IA.

30. **Shaw, A.** 2012. On-Farm food safety. Midwest Aronia Association Annual Conference. West Des Moines, IA.
31. **Shaw, A.** 2012. Overview to Food Safety Modernization Act within animal feed industry. Dubuque Farmers Market Association. Dubuque, IA.
32. **Shaw, A.** 2012. Food safety in bulk grains: Developing food safety and recordkeeping plans. AAI Showcase and Conference, Grain and Feed Forum. Des Moines, IA.
33. **Shaw, A.** 2012. Food Safety: Prevention is key. Northeast Iowa Food & Farm Expo. Calmar, IA.
34. **Shaw, A.** 2012. Overview of Food Safety Modernization Act and personnel hygiene within popcorn industry. Jolly Time Popcorn. Sioux City, IA.
35. **Shaw, A.** 2012. Food safety and how it will impact your operation. Iowa Fruit and Vegetable Growers Association Annual Conference. Ankeny, IA.
36. **Shaw-Laury, A.** 2012. Which knowledge we gain from our teaching endeavor for food microbiology education: The experience of training agriculture teachers. 9th Congress of Slovenian Biochemical Society/5th Congress of Slovenian Microbiological Society/3rd CEFORM. Maribor, Slovenia.
37. **Shaw, A.** 2011. Overview of the Food Safety Modernization Act. Iowa Food Safety Task Force Meeting. Des Moines, IA.

GRANTS AND PROJECT FUNDINGS

SUMMARY OF FUNDING of total sponsored projects directly to laboratory is $5,092,207 from August 2011 to May 2023. The total grant awards were *$18,756,576* from August 2011 to October 23.

Project Role	Number of Funded Projects	Intramural	Extramural	Total Funding
PI	21	$56,945	$4,183,460	**$4,240,405**
Co-PI	16	$16,220	$835,582	**$851,802**
Total	**37**	**$73,165**	**$5,019,042**	**$5,092,207**

Project Title	Grantor	Role	Other Investigators	Project Duration	Total $ Awarded (Allocated to Shaw Lab) I=Internal E=External
Review of the Evidence-Based Food Safety Education Program called Produce Safety University	USDA Food and Nutrition Services	PI	Lawver, D. Brashears, T. Rayfield, J. Strohbehn, C.	2023-2025	$600,000 ($600,00) (E)
PI' Project Director: Grant focuses on the review of the Produce Safety University curriculum that seeks to educate state agencies, food service directors and nutrition program leaders on produce safety. This is the first ever formal review of the program since it began.90% concept ; 80% writing and editing of the grant proposal.					
Empowering Minority Serving Institutions Food Safety specialists to write successful Food Safety Outreach Program grants through education, training and technical assistance	USDA NIFA Food Safety Outreach Program	PI	Shaw, A., Jackson-Davis, A., Coleman, S.	2023-2026	$300,000 ($300,00) (E)

PI; Project Director: Grant focuses on empowering Minority-Serving Institition Food Safety Specialists in grant writing to increase the success rate. Multi-institutional grant with Alabama A&M University and Iowa State University. 90% concept; 75% writing and editing of the grant proposal					
Identifying the food safety research and extension gaps within the controlled environmental agricultural fruit and vegetable industry	USDA NIFA Agriculture and Food Research Initiative Conference Grant	PI	Shaw, A., Gibson, K., Millner, P., Ilic, S., Callahan, C., Amalaradjou, MA	2023-2024	$50,000 ($50,000) (E)
PI; Project Director; Conference focused on the food safety research and extension and outreach needs within controlled environmental agriculture production facilities. Multi-institutional grant with University of Arkansas, University of Vermont, University of Connecticut, and USDA-ARS. 90% concept; 75% writing and editing of the grant proposal					
CEA HERB: Controlled Environment Agriculture Herb Extension and Research Base	USDA NIFA Specialty Crops Research Initiative	Co-PI	Lopez, R.; Behe, B.; Boldt, J.; Cloyd, R.; Currey, C.; Hausbeck, M.; Faust, J.; Rihn, A.; Runkle, E.; Shaw, A.; Walters, K.; Whipker, B.	2022-2026	$3,482,251 ($189,734) (E)
Co-PI; Leading microbiology research; Supervised PhD student and undergraduate students Shaw lab analyzed all microbial samples from the participating CEA. Competitive federal grant; Multi-institutional grant with University of California-Davis, University of Kentucky; Multi-disciplinary between animal science, horticulture, and food science; 10% concept; 10% writing and editing of the grant proposal (75% concept design, writing and editing of microbial objectives)					
Ensuring Food Safety Competency of Produce Growers and Processors in the NCR Through Expanded Collaboration with Diversified Populations	USDA Food Safety Outreach Program	PI	E. Johnsen, A. Enderton, D. Fillius, K. Krishnamurthy, A. Deering, L. Nwadike, P. Tocco, A. Hultberg, C. Borgwordt, B. Chaves-Elizondo, J. Garden-Robinson, S. Ilic, R. Burrow, K. Krokowski	2021-2024	$799, 757 ($799,757) (E)
PI; Project Director; Supervised P&S position, and undergraduate students; Manage an extension team of 42 food safety educators and 80 active partners of academia, industry, non-profits, commodity groups and government. Shaw analyzed all quantitative and qualitative data associated with knowledge and behavioral change research and assisted with the annual evaluation of the center and events. Competitive federal grant; multi-institutional grant with University of Illinois, ISU, Purdue University, Kansas State University, University of Minnesota, Lincoln University, University of Nebraska-Lincoln, North Dakota State University, The Ohio State University, South Dakota State University, University of Wisconsin-Madison and Michigan State University. 75% concept; 90% writing and editing of the grant proposal.					
Integrating vegetable, poultry, and cover cropping practices to enhance resiliency in organic production systems	USDA National Institute of Food and	Co-PI	Nair, A. (PI), E. Bobeck, A. Plastina, D. Ahn,	2019-2023	$2,000,000 ($163,000) (E)

	Agriculture: Organic Agriculture Research and Extension Initiative		K. Delate, M. McDaniel, M. Pitesky, M. Williams, D. Gonthier, J. Mitchell, D. Niemeier, J. Dickson		
Co-PI; Leading microbiology research with Dr. James Dickson; Shaw lab analyzed all microbial samples. Competitive federal grant; Multi-institutional grant with University of California-Davis, University of Kentucky; Multi-disciplinary between animal science, horticulture, and food science; 10% concept; 10% writing and editing of the grant proposal (75% concept design, writing and editing of microbial objectives)					
Developing a Coordinated Effort within Iowa to Implement an Infrastructure, Education, Technical Assistance, and Inventory Program in Alignment with the FDA's Produce Safety Rule	PAR-16-137 Funding of the FDA Cooperative Agreement PSR (Subcontract of $1.8 Million through Iowa Department of Agriculture and Land Stewardship)	PI	A. Naig, S. Coleman, T. Wiemerslage A. Enderton	2021-2022	$85,000 ($85,000) (E)
PI; Project Director; Supervised P&S position, and undergraduate students; Manage a research team of six faculty members. Shaw analyzed all quantitative and qualitative data associated with knowledge and behavioral change research. Competitive external grant; Multi-disciplinary between horticulture; value added agriculture, hospitality management and food science; 75% concept; 90% writing and editing of the grant proposal					
Continued Successful Implementation of FSMA in the North Central Region through Adoption of a Systems Approach and Stakeholder Engagement	USDA Food Safety Outreach Program	Co-PI/ PI as of June 2021	J. Hannan (PI), R. Choudhary, A. Enderton, A. Topaloff, M. Singh, L. Nwadike, A. Hultberg, T. Eaton, S. Browning, J. Garden-Robinson, R. Burrows, E. Silva, S. Ilic	2018-2022* (no cost extension from 2021-2022)	$799,757 ($171,616) (E)
Co-PI/PI; This is the renewal of my NCR Center. Under USDA, I was unable to apply as a PI because of language in the 2018 Farm Bill which prohibited repeat PI on these grants. As a result, the new PI and I will jointly run the NCR Center. The PI left the university in June 2021 and I became sole PI of the project through the no cost extension. Supervised P&S position, and undergraduate students; Manage a research team of 15 faculty members and 26 advisory board members. Shaw analyzed all quantitative and qualitative data associated with knowledge and behavioral change research and evaluation of center work. Competitive federal grant; multi-institutional grant with Southern Illinois University, ISU, Purdue University, Kansas State University, University of Minnesota, Lincoln University, University of Nebraska-Lincoln, North Dakota State University, The Ohio State University, South Dakota State University, University of Wisconsin-Madison and Michigan State University. 50% concept; 50% writing and editing of the grant proposal.					
Assessing the food safety knowledge gained from underserved refugee populations in Iowa	Agriculture and Natural Resources Extension and Outreach	PI	Coleman, S. (Co-PI) M. Bhullar, B. Perry, J. Hannan,	2019-2020	$10,000 ($10,000) (I)

			D. Fillus, A. Naig, T. Wiemerslage,		
PI; Competitive internal grant; Shaw will be working with members in the Department of Food Science and Human Nutrition and Horticulture to complete this project. 25% concept; 25% writing and editing of the grant proposal					
Water testing for Produce growers in Iowa	Agriculture and Natural Resources Extension and Outreach	PI	Bhullar, M., J. Hannan, D. Fillus, A. Naig, T. Wiemerslage, S. Coleman	2019-2020	$9,906 ($9,906) (I)
PI; Competitive internal grant; Shaw lab analyzed all microbial samples. 100% concept; 75% writing and editing of the grant proposal					
Agritourism Destination Safety and Health Best Practices Workshop	Great Plains Center for Agricultural Health	Collaborator	R. Hansen, K. Meyer, S. Hoyle (A. Shaw)	2017-2019	$30,000 ($500) (E)
Collaborator; Part of the Extension team; Competitive external grant; Multi-discipline project with Value Added Agriculture, Food Science, and Horticulture at Iowa State University; 0% concept; 5% writing and editing of the grant proposal (100% of concept design, writing and editing of Food Safety objective)					
Educating Iowans about the importance of water food safety when growing fruits and vegetables	Human Science Extension and Outreach	PI	N/A	2016-2017	$2,365 ($2,365) (I)
PI; Competitive internal grant; Shaw lab analyzed all microbial samples. 100% concept; 100% writing and editing of the grant proposal					
Developing a Coordinated Effort within Iowa to Implement an Infrastructure, Education, Technical Assistance, and Inventory Program in Alignment with the FDA's Produce Safety Rule	Iowa Department of Agriculture and Land Stewardship (subcontract of $2.8 million FDA PAR-16-137)	PI	L. Naeve, S. Coleman, A. Naig, J. Hannan, T. Wiemerslage	2016-2021	$1,180,000 ($1,180,000) (E)
PI; Project Director; Supervised P&S position, PhD student, and undergraduate students; Manage a research team of six faculty members. Shaw analyzed all quantitative and qualitative data associated with knowledge and behavioral change research. Competitive external grant; Multi-disciplinary between horticulture; value added agriculture, hospitality management and food science; 75% concept; 90% writing and editing of the grant proposal					
North Central Region through Adoption of a Systems Approach and Stakeholder Engagement Framework	U.S. Food and Drug Administration: National Institutes of Health	PI	C. Strohbehn, L. Naeve, J. Hannan, M. Hosier, A. Enderton, A. Topaloff, M. Singh, L. Nwadike, M. Schermann, T. Eaton, S. Browning, J. Garden-Robinson, R. Burrows, E. Silva,	2016-2019	$950,000 (E)

			J. LeJeune		
PI; Project Director; Supervised P&S position, PhD student, and undergraduate students; Manage a research team of 16 faculty members and 30 extension partners. Shaw lab analyzed all quantitative and qualitative data. Competitive federal grant; multi-institutional grant with University of Illinois, ISU, Purdue University, Kansas State University, University of Minnesota, Lincoln University, University of Nebraska-Lincoln, North Dakota State University, The Ohio State University, South Dakota State University, University of Wisconsin-Madison and Michigan State University. 75% concept; 90% writing and editing of the grant proposal.					
Food Safety Innovations and Preventive Controls during Fresh and Fresh-Cut Produce Washing, Packing, and Retail Display	USDA NIFA Standard Research and Extension Project	Co-PI	Luo, Y., (P.D), X. Millners, L. Nou, G. Bourouriba, M. Thompson, M. Cantwell, K. Vorst	2016-2021	$3,760,813 ($167,402) (E)
Co-PI; Lead of extension component; Supervised a PhD student, a MS student, and 2 undergraduates. Developed public website; Shaw lab analyzed all quantitative and qualitative data of extension objectives. Competitive internal grant; Multi-organizational between federal partners (USDA and FDA), produce industry (10 partners) and academia (6 universities); 10% concept; 5% writing and editing of the grant proposal (75% concept design, writing and editing of extension and outreach plan)					
Development of a planning and decision tool for the Iowa regional food hub logistics network	Leopold Center for Sustainable Agriculture at Iowa State University	Co-PI	Krejci, C. (PI), A. Shaw	2015-2017	$49,948 ($500) (I)
Co-PI; Lead extension microbiologist; Competitive internal grant; Multi-disciplinary between food engineering and food science; 5% concept; 5% writing and editing of the grant proposal					
Integrating crops and livestock in a system approach to enhance organic farm stability, safety, resilience	USDA National Institute of Food and Agriculture: Organic Agriculture Research and Extension Initiative	Co-PI	Delate, K. (PI), B Heins, P. Pagliari, C. Chase, J. Hayden, J. Moyer	2014-2018	$1,924,000 ($100,000) (E)
Co-PI; Lead microbiologist; Shaw lab analyzed all microbial samples. Competitive federal grant; Multi-institutional grant with University of Minnesota and Rodale Institute; Multi-disciplinary between dairy science, horticulture, and food science; 25% concept; 25% writing and editing of the grant proposal (100% concept design, writing and editing of microbial objectives)					
Cover crops and strip tillage to promote soil quality, environmental sustainability, food safety, and profitability in cucurbit cropping systems	North Central Region Sustainable Agriculture Research and Education Program	Co-PI	Nair, A. (PI) D. Brainard, C. Chase, C. Bregendahl	2014-2017	$198,353 ($12,800) (E)
Co-PI; Lead microbiologist; Shaw lab analyzed all microbial samples. Competitive external grant; Multi-institutional grant with Michigan State University; Multi-disciplinary between horticulture and food science; 25% concept; 25% writing and editing of the grant proposal (100% concept design, writing and editing of microbial objectives)					
Establishing a standard of identity for jams and jellies made from aronia berries	USDA-Specialty Crop Block Grant	Co-PI	Wilson, L.(PI) T. Boylston	2014-2016	$23,558 ($10,000) (E)
Co-PI; Lead microbiologist; Shaw lab analyzed all microbial samples. Competitive federal grant; Multi-disciplinary between food quality, food sensory analysis, and food microbiology; 50% concept; 50% writing and editing of the grant					

proposal (100% concept design, writing and editing of microbial objectives)					
Market recovery options for berries damaged by spotted winged drosophila	USDA Federal-State Marketing Improvement Program	PI	J. Hannan, C.Strohbehn, C.Chase, R.Hansen, L.Wilson, C. Bregendahl	2014-2016	$40,258 ($40,258) (E)
PI; Lead microbiologist; Manage a team of six faculty members. Supervised two undergraduate students; Shaw lab analyzed all microbial samples. Competitive federal grant; Multi-disciplinary between food quality, food sensory analysis, and food microbiology; 75% concept; 75% writing and editing of the grant proposal (100% concept design, writing and editing of microbial objectives)					
Minimizing food safety risk at the farmers' markets through online education for producer vendors and market managers	USDA-Agricultural marketing Service: Specialty Crop Block Grant	PI	C. Strohbehn, L. Naeve	2014-2016	$24,000 ($24,000) (E)
PI; Lead extension microbiologist; Supervised an undergraduate student; Manage a research team of three faculty members. Developed 1/3 of the educational curriculum. Competitive external grant; Multi-disciplinary between value added agriculture, hospitality management and food science; 33% concept; 75% writing and editing of the grant proposal					
Ensuring the safety of organic apples and grapes through ecologically-based plant protection	United Natural Foods Foundation	Co-PI	K. Delegate	2014-2015	$5,000 ($3,000) (E)
Co-PI; Lead microbiologist; Shaw lab analyzed all microbial samples. Competitive external grant; Multi-disciplinary between horticulture and food science; 50% concept; 50% writing and editing of the grant proposal (100% concept design, writing and editing of microbial objectives)					
Food safety, economics, and environmental impacts of aquaponics in Iowa	Leopold Center for Sustainable Agriculture at Iowa State University	Co-PI	Pattillo, D.A. (PI), KA. Rosentrater	2014	$48,751 ($6,720) (I)
Co-PI; Lead microbiologist; Shaw lab analyzed all microbial samples. Competitive internal grant; Multi-disciplinary between forestry, agricultural engineering and food science; 33% concept; 50% writing and editing of the grant proposal (100% concept design, writing and editing of microbial objectives)					
Mitigating risks of foodborne illness associated with handling leafy greens in retail foodservice establishments serving aging populations	USDA National Institute of Food and Agriculture	Co-PI	Arendt, S., (PI) C. Strohbehn, L. Rajagopal, K. Sauer	2013-2015	$424,846 ($113,000) (E)
Co-PI; Lead microbiologist; Shaw lab analyzed all microbial samples. Competitive federal grant; Multi-institutional grant with Kansas State University; Multi-disciplinary between hospitality management and food science; 20% concept; 20% writing and editing of the grant proposal (100% concept design, writing and editing of microbial objectives)					
Development of an online food safety training for employees of university farms and school gardens	Leopold Center for Sustainable Agriculture at Iowa State University	PI	C. Strohbehn, L. Naeve	2013	$28,391 ($28,391) (I)
PI; Lead extension microbiologist; Supervised a MS student and an undergraduate student; Manage a research team of three faculty members. Developed 33% of the educational curriculum. Competitive internal grant; Multi-disciplinary between value added agriculture, hospitality management and food science; 33% concept; 75% writing and editing of the grant proposal					
Best practices food safety and food defense for retail foodservices	Iowa Department of Inspection and	Co-PI	C. Strohbehn (PI), J. Meyer	2013	$8,000 ($8,000) (E)

	Appeals (USDA Grant)				
Co-PI; Lead extension microbiologist; Developed 33% of the educational curriculum. Competitive external grant; Multi-disciplinary between hospitality management and food science; 33% concept; 50% writing and editing of the grant proposal					
Borlaug FtF Fellow from Ethiopia (Food Safety- table eggs)	USDA/ Foreign Agricultural Services	Co-PI	D. Bjelland	2012-2015	$29,825.40 ($21,700) (E)
PI; Competitive federal grant; Supervisor of Borlaug Fellow; Shaw lab analyzed all microbial samples. 100% concept; 100% writing and editing of the grant proposal					
Statewide on-farm food safety program	USDA-Agricultural marketing Service: Specialty Crop Block Grant	PI	C. Strohbehn, P. Domoto, L. Wilson, L. Naeve, M. Smith	2012-2015	$23,939 ($23,939) (E)
PI; Lead extension microbiologist; Supervised an undergraduate student; Manage a research team of six faculty members. Developed 20% of the educational curriculum. Competitive external grant; Multi-disciplinary between value added agriculture, hospitality management and food science; 20% concept; 75% writing and editing of the grant proposal					
Food safety curriculum for the bulk agricultural product supply	National Institutes of Health	Co-PI	C. Hurburgh (PI), J. Roth, G. Mosher	2012-2014	$1,483,522 ($40,000) (E)
Co-PI; Lead microbiologist; Shaw lab analyzed all microbial samples. Competitive internal grant; Multi-disciplinary between forestry, agricultural engineering and food science; 33% concept; 50% writing and editing of the grant proposal (100% concept design, writing and editing of microbial objectives)					
Managing wholesale production, marketing, financial, and human risks for Iowa specialty crop farmers	Family Farmed.org (USDA Grant)	PI	N/A	2012-2013	$5,000 ($5,000) (E)
PI; Competitive external grant; Developed 100% of the educational curriculum; Worked with 12 different extension offices throughout Iowa and surrounding states. 100% concept; 100% writing and editing of the grant proposal					
Making Iowa the healthiest state: Iowa State University extension and outreach/Hy-Vee collaboration	Iowa State University VPEO Strategic Initiatives Proposal	Co-PI	Litchfield, R. (PI). S. Francis, R .Martin	2012-2015	$222,516 ($7,500) (I)
Co-PI; Lead extension microbiologist; POS committee of MS student; Developed 5% of the educational curriculum. Competitive internal grant; Multi-disciplinary between nutrition and food science; 5% concept; 5% writing and editing of the grant proposal					
Integration of local food system development projects – Family Food Tour of NW Iowa and the Iowa Food System Working Group (IFSWG)	Iowa State University VPEO Strategic Initiatives Proposal	Co-PI	Craig, C. (PI), T.Wiemerslage, A Nair, C. Strohbehn, J. Gatewood, L. Naeve, J. Toering, R.Wrage, A.Vandehaar, J. Hannan, C. Bregendahl, J. Lawrence	2012-2013	$202,812 ($1,000) (I)
Co-PI; Lead extension microbiologist; Competitive internal grant; Multi-disciplinary between value added agriculture, ag economics, horticulture, hospitality management, nutrition and food science; 5% concept; 5% writing and editing of the					

grant proposal					
Equipping Iowa State University Extension specialist with food safety knowledge to impact Iowans lives	Heddleson Faculty Grant	PI	N/A	2012-2013	$1,800 ($1,800) (I)
PI; Competitive internal grant; Developed 100% of the educational curriculum; Worked with 10 different extension offices throughout Iowa. 100% concept; 100% writing and editing of the grant proposal					
Food Safety/Good agricultural practices training for extension educators	Iowa Sustainable Agriculture Research & Education	PI	A. Larson	2012	$4,483 ($4,483) (I)
PI; Lead extension microbiologist; Developed 100% of the educational curriculum. Competitive external grant; Multi-disciplinary between value added ag and food science; 75% concept; 90% writing and editing of the grant proposal					
Food Safety and Defense for Direct Sales: *What Entrepreneurs need to know about regulations*	Iowa Department of Inspection and Appeals (USDA Grant)	PI	C. Strohbehn, J. Meyer	2012	$8,000 ($8,000) (I)
PI; Lead extension microbiologist; Developed 33% of the educational curriculum. Competitive external grant; Multi-disciplinary between hospitality management and food science; 33% concept; 50% writing and editing of the grant proposal					
Cross contamination of *E.coli* O157:H7 from handler's hand s to strawberries during collection and survivability during growth	North American Strawberry Growers Association	PI	B. Nonnecke	2012	$6,990 ($6,990) (E)
PI; Lead microbiologist; Supervised undergraduate students; Shaw lab analyzed all microbial samples. Competitive external commodity grant; Multi-disciplinary between horticulture and food science; 50% concept; 50% writing and editing of the grant proposal (100% concept design, writing and editing of microbial objectives)					

Funded Positions from Grants (4)

Dates	Name	Role	Comments
2017-Present	Ellen Johnsen	Project Coordinator for FDA North Central Regional Center for FSMA grant	Education and Programming Expert
2021-2022	Teresa Wiemerslage, M.S.	Project Coordinator/ Food Safety Extension and Outreach for FDA/ Iowa Department of Agriculture and Land Stewardship Cooperative Agreement	50% time paid by grant
2018-2021	Dan Fillius, M.S.	Project Coordinator/ Food Safety Extension and Outreach for FDA/ Iowa Department of Agriculture and Land Stewardship Cooperative Agreement	Food Safety Expert
2017-2018	Dr. Smaranda Andrews	Project Coordinator/ Food Safety Extension and Outreach for FDA/ Iowa Department of Agriculture and Land Stewardship Cooperative Agreement	Organic Food Safety Expert

SUPERVISORY POSITIONS (6)

Dates	Name	Role	Comments
2021-2022	Andre Salazar, M.S.	Food safety extension specialist paid by ANR Extension and Outreach	Education Extension Specialist I

2017-2022	Ellen Johnsen	Project Coordinator for FDA North Central Regional Center for FSMA grant	Education Extension Specialist III
2018-2021	Dan Fillius, M.S.	Project Coordinator/ Food Safety Extension and Outreach for FDA/ Iowa Department of Agriculture and Land Stewardship Cooperative Agreement	Education Extension Specialist II
2017-2018	Dr. Smaranda Andrews	Project Coordinator/ Food Safety Extension and Outreach for FDA/ Iowa Department of Agriculture and Land Stewardship Cooperative Agreement	Extension Lecturer
2013-2017	Dr. Aura Daraba	Post-Doctoral Research Associate	Associate Professor at Dunarea de Jos University of Galaţi, Romania
2012-2014	Heather Snyder, M.S.	Food Safety Extension and Outreach	Current Head of Food Microbiology Laboratory for Hormel

STUDENT MENTORSHIP

Service to Graduate Student Research

Student	Degree	Role	Graduation Date
Texas Tech University (9 Total; 8 as Major Professor: 3 PhD and 4 MS; 1 withdrawal)			
Doreen Edebe	PhD Animal Science	Major Professor	2026
Fabien Matsiko	PhD Animal Science	Major Professor	2026
Laura Araujo	MS Food Science	Major Professor	2025
Liliana Gutierrez	MS Food Science	Major Professor	2025
Nadira Espinoza Rock	PhD Animal Science	Committee Member	2023
Grace Akumu	PhD Animal Science	Major Professor	2026
Laura Ajata	MS Food Science	Major Professor	2025
Ronny Barrerra	MS Food Science	Major Professor	2025
Philip Musoke	PhD Animal Science	Major Professor	Withdrawal 2023
Iowa State University (48 Total; 14 as Major Professor: 5 PhD and 8 MS, 1 withdrawal)			
Baidini Ghosh	MS Food Science	Major Professor	2023
Chinwendu Ozoh	PhD Food Science	Major Professor	Withdrawal 2022
Lillian Nabwiire	PhD Food Science	Major Professor	2023
Michael Cropp	PhD Meat Science	Committee Member	2023
Justin Anast	PhD Microbiology	Committee Member	2022
Bridget Perry	PhD Food Science	Major Professor	August 2022
Shalini Wijeratne	MS Food Science	Committee Member	August 2022
Warren Johnson	MS Apparel, Educational Studies, and Hospitality Management	Committee Member	December 2021
Emalie Thomas-Popo	PhD Food Science	Committee Member	December 2021
William (Bill) Knapp	PhD Apparel, Educational Studies, and Hospitality Management	Committee Member	December 2021
Moriah Bilenky	PhD Horticulture	Committee Member	May 2021
Boya Luo	MS Apparel, Educational Studies, and Hospitality Management	Committee Member	May 2020
Lillian Nabwiire	MS Food Science and Horticulture	Major Professor	May 2020
Manreet Bhullar	PhD Food Science	Major Professor	December 2019
Ana Lorena Monge	PhD Food Science	Major Professor	December 2019

Samuel Kiprotich	MS Food Science	Committee Member	December 2019
Jacques Overdiep	MS Food Science	Major Professor	May 2018
Niraja Shivalingaiah	MS Food Science	Major Professor	May 2018
Nathan Eylands	MS Horticulture at University of Arkansas	Committee Member	December 2018
Joshua Nazareth	MS Food Science	Major Professor	May 2017
Amber Kastler	MS GPIDEA-Dietetics Masters of Food and Consumer Science	Committee Member	May 2017
John Fox	MS Food Science	Committee Member	May 2017
Kelsey Choquette	MS Food Science	Committee Member	May 2017
Fei Wang	PhD Microbiology	Committee Member	May 2017
Amy Henry	MS Agricultural Education	Committee Member	May 2017
Bella Chan	PhD Apparel, Educational Studies, and Hospitality Management	Committee Member	May 2017
Dawei Li	MS Apparel, Educational Studies, and Hospitality Management	Committee Member	May 2017
William L. Solomon	PhD Apparel, Educational Studies, and Hospitality Management	Committee Member	May 2016
David Manu	PhD Food Science	Committee Member	May 2016
Cathleen Taylor	MS Agricultural Education	Committee Member	May 2016
Mani Kumar Badvela	PhD Meat Science	Committee Member	May 2016
Kun Xie	MS Food Engineering	Committee Member	May 2016
Sai Elumalai	MS Food Science	Major Professor	May 2015
Amber Roy (Noterman)	MS Food Science	Major Professor	May 2015
John Dzubak	MS Food Science	Major Professor	May 2015
Amanda Svoboda	PhD Food Science	Major Professor	May 2015
Megan Myers	MS Meat Science	Committee Member	May 2015
Cynthia Dawso Van Druff	PhD Apparel, Educational Studies, and Hospitality Management	Committee Member	May 2011

Service to Undergraduate Student Research

Student	**Degree**	**Role**	**Graduation Date**
Texas Tech University (1)			
Presley Brashears	Food Science	Research	Summer 2023
Iowa State University (16)			
Kylie Plagakis	Dietetics	Research	May 2024
Alexander Krob	Genetics	Research	May 2024
Alexias Townsend	Animal Science	Research	May 2024
Siri Makanga	Microbiology	Research	May 2019
Kathryn Hinshaw	Microbiology	Research	May 2018
Yuliya Kovalenk	Food Science	Research	May 2017
Morgan Denzer	Food Science	Research	May 2017
Carlos Poemape	Architect/ agronomy	Research	May 2017
Lucille Little	Animal Science	Research	May 2015
Jodie Johnson	Ag Education	Research	May 2015
Nicholas Gross	Horticulture	Research	December 2015
Kara Helterbran	Microbiology	Research	August 2015
Erina Gunawan	Food Science	Research	May 2014
Cody Henkle	Dairy Science	Research	May 2014
We Yeok (Patrick)	Food Science	Research	May 2013
Beatrice Jie	Food Science	Research	August 2013

Internship Student Research

Student	Program	Role	Date
Texas Tech University (2)			
Brenda Fabiola Jovel Gonzalez	Zamorano University	Research Intern	Spring 2023
Elva Alcira Hernandez Guetemala	Zamarano University	Research Intern	Spring 2023
Iowa State University (19)			
Daysia Williams *Tuskegee University*	George Washington Carver Scholar Intern	Research Intern	Summer 2019
Mikuel Hicks *Tuskegee University*	George Washington Carver Scholar Intern	Research Intern	Summer 2019
Jessyca Martinez-Velez *University of Puerto Rico*	George Washington Carver Scholar Intern	Research Intern	Summer 2019
Kelvin Lopez Alonzo *University of Puerto Rico*	George Washington Carver Scholar Intern	Research Intern	Summer 2019
Briana Young *Central Michigan University*	George Washington Carver Scholar Intern	Research Intern	Summer 2018
Keith Fennel *North Carolina A&T University*	George Washington Carver Scholar Intern	Research Intern	Summer 2018
Yazrah Randall *Tuskegee University*	George Washington Carver Scholar Intern	Research Intern	Summer 2017
Jasmine Roberts *Tuskegee University*	George Washington Carver Scholar Intern	Research Intern	Summer 2016
Terry Vines *Tuskegee University*	George Washington Carver Scholar Intern	Research Intern	Summer 2016
Cecile Cesarini *France*	PUF 6 month France intern from ONIRIS Food Science School	Research Intern	Mar-Sept 2016
Bridget Perry *Tuskegee University*	George Washington Carver Scholar Intern	Research Intern	Summer 2015
Jason White *Tuskegee University*	George Washington Carver Scholar Intern	Research Intern	Summer 2015
Bryant Moore *Tuskegee University*	George Washington Carver Scholar Intern	Research Intern	Summer 2015
Che Deer *Oklahoma*	George Washington Carver Scholar Intern (High School)	Research Intern	Summer 2014
Nehu Manu *New York*	George Washington Carver Scholar Intern (High School)	Research Intern	Summer 2014
Asana Zilk *Iowa*	George Washington Carver Scholar Intern (High School)	Research Intern	Summer 2014
Adalissa Ortiz *Missouri*	George Washington Carver Scholar Intern (High School)	Research Intern	Summer 2013
Genevieve Sullivan	Cornell University Exchange	Research Intern	Summer 2013
Courtney Williams *Central Missouri University*	George Washington Carver Scholar Intern	Research Intern	Summer 2012

TEACHING: 10% Teaching Appointment at Texas Tech University

- Produce Safety Alliance for Produce Safety Alliance Grower Training
  - Texas A&M University and Texas Department of Agriculture Collaboration
  - Virtual Trainings
  - July 25th and 27th, 2023 (12 participants, TTU Graduate Students)

    - June 29th and 30th, 2023 (16 participants)
    - March 8th and 9th, 2023 (17 participants)
    - November 3rd and 4th, 2022 (10 participants)
- Texas Food Safety & Defense Task Force Presentation
    - February 15th, 2023 (124 participants)
    - Provided a lecture on produce safety and lessons learned
- Horticulture 351 Hydroponic Food Production, Michigan State University- Guest Lecture Dr. Roberto Lopez
    - September 15th, 2022 (45 participants)
    - October 12th, 2023 (X participants)

No teaching appointment at Iowa State University

- Agricultural Education and Studies 111: Dean's Leadership- Dr. Carmen Bain and Dean Robinson Faculty
    - Taught: Fall of 2020 and 2021 (~20 students per class)
- Animal Science 684: Meat Science Seminar- Dr. Joseph Sebranek
    - Spring 2018, 2016, and 2014 (~10 students per class)
- Animal Science/Food Science/Hospitality Management 489: Issues in Food Safety-Dr. Ani Naig
    - Spring 2013, 2014, 2019, and 2020 (~20 students per class)
- Food Science and Human Nutrition
    - 208X: Dairy Foods Current Issues and Controversies-Dr. Stephanie Clark
        - Spring 2012, 2013, 2014, and 2017 (~30 students per class)
    - 405: Food Quality Assurance-Drs. Lester Wilson and Joey Talbert
        - Spring 2012, 2017, and 2018 (~40 students per class)
    - 471: Food Processing-Dr. Stephanie Jung
        - Spring 2013 (~30 students per class)
    - 420: Food Microbiology-Dr. Aubrey Mendonca
        - Spring 2012 (~40 students per class)
- Horticulture
    - 331: Hydroponics-Dr. Chris Currey
        - Fall 2014, 2015, 2016, 2017, 2018, and 2019 (~30 students per class)
    - 376: Field Production of Horticultural Corps-Drs. Diana Cochane and Ajay Nair
        - Fall 2015, 2016, 2017, 2018, 2019, and 2020 (~25 students per class)
    - 422: Post Harvest Processing-Dr. Dick Gladden
        - Fall 2014 and 2019 (~25 students per class)
    - 461: Fruit Production-Dr. Gail Nonnecke
        - Spring 2013, 2014, 2016, 2018, 2020, and 2021 (~30 students per class)
    - 471: Vegetable Production-Dr. Ajay Nair
        - Spring 2012, 2014, 2018, 2019, 2020, and 2021 (~20 students per class)
    - Department Seminar Series- Dr. Kathleen Delegate
        - Spring 2014 and 2018 (~25 students/staff/faculty per class)

- Kinesiology 110: Personal and Consumer Health- Dr. Tyanez Jones
    - Fall 2014 and Spring 2015 (~200 students per class)
- Master of Business Administration: Traceability Course-Drs. Byron Brehm-Stecher, James Dickson, Shannon Coleman, Gretchen Mosher, and Angela Shaw
    - Lead person in development of Course: Fall 2020 and 2021 offered (~15 students per class)
- Courses taught at Texas Tech University include Introduction to Food Microbiology with laboratory, Introduction to Hazard Analysis Critical Control Points (HACCP), and Introduction to Sanitation.

SERVICE AND OUTREACH

Institutional Service- University Level

- 2022-Present: Faculty Success Mid Career Committee at Texas Tech University
- 2022-Present Women Faculty of Color at Texas Tech University Group: Meet monthly to support faculty of color at Tech.
- 2020-2022: At Large Faculty Senator for College of Agriculture and Life Sciences at Iowa State University
- 2020-2022: Member of Athletic Council at Iowa State University
- 2020-2022: Extension Faculty Taskforce at Iowa State University within Provost Office
- 2020-2021: COVID-19 Initiative Team Food at Iowa State University Extension and Outreach
- 2019-2022 Lead of the Program of Work (POW) Produce Safety Team at Iowa State University Agriculture and Natural Resources Extension and Outreach
- 2018-2022: Member of George Washington Carver Faculty Council at Iowa State University
- 2017-2022: Black Faculty and Staff Association at Iowa State University
    1. Incoming Chair (2017); Current Chair (2018-2019; 2020-2021); Past Chair (2019-2020; 2021-2022)
    2. Awards Committee: 2019-2022
    3. Welcome Committee: 2012-2022
- 2017: Search Committee Member for Director of Extension and Outreach at Iowa State University
- 2013: Search Committee Member for Families Extension Program at Iowa State University

Institutional Service- College Level

- 2019-2021: Member of Search Committee for Associate Dean of Academic Innovation for the College of Agriculture and Life Sciences
- 2015-2017 and 2019-2021 Member of College of Agriculture and Life Sciences Diversity and Inclusion Committee
- 2018-2019: Member of College of Agriculture and Life Sciences Task Force for CALS Student Council.
- 2012: Search Committee Member for Assistant Dean for Diversity for College of Agriculture and Life Sciences in at Iowa State University

Institutional Service- Department Level

- Spring 2023: Committee Chair: Department Onboarding Committee
- 2022: Search Committee Member for Department Chair for Food Science and Human Nutrition
- 2020-2022: Member of Food Science and Technology Graduate Advisory Committee for the Department of Food Science and Human Nutrition
- 2015-2022: Lead of Signature Area Community Health and Food Science Education
- 2015-2016; 2021-2022: Member of Awards Committee for Department of Food Science and Human Nutrition
- 2020-2021: Member of Department Advisory Committee for the Department of Food Science and Human Nutrition
- 2019-2021: Chair of Equity, Diversity and Inclusion Committee for the Department of Food Science and Human Nutrition
- 2021, 2019, 2018, 2017, 2016: Iowa FFA Food Science Contest Product Development and Complaint Letter Judge
- 2019-2020: Chair of Faculty Review Committee for the Department of Food Science and Human Nutrition
- 2018-2019: Task Force Equity for the Department of Food Science and Human Nutrition
- 2018-2019: Chair of Search Committee for Assistant Professor of Enology in Department of Food Science and Human Nutrition at Iowa State University
- 2017-2019: Chair of the Graduate Student Admission and Recruitment Committee for Department of Food Science and Human Nutrition
    - Initiated a change in the graduate student admission policy toward an inclusive approach based on research, teaching, extension, and work experience. Previous admission policy evaluated solely on GPA and GRE scores.
    - Developed a protocol guide for the committee that included the history of the committee policies and details of procedures.
- 2014-2017: Co-Coach of the Iowa State University Institute of Food Technologist College Bowl Team
- 2012-2017 and 2019-2020: Member of Graduate Admissions and Recruitment Committee for Department of Food Science and Human Nutrition
- 2016-2017: DAC Committee for Department of Food Science and Human Nutrition
- 2014-2017: Member of Undergraduate Recruitment Committee for Department of Food Science and Human Nutrition
- 2016: Member of Website Development Committee for Department of Food Science and Human Nutrition
- 2013-2018: Youth Food Science Education Promotion (K-12): World Food Prize/ Youth Institute/World Food Interactive Session.
- 2012-2013: Member of Seminar Committee for Department of Food Science and Human Nutrition
- 2011-2018: Youth Food Science Education Promotion (K-12): Science Bound Laboratory Interactive Sessions.

Community-Based Service in Ames, Iowa

- The Ames Youth and School Action Team: A non-partisan group of concerned citizens whose intention is to shine light on racial and ethnic disparities that exist throughout the Ames Community School District. Founded in January 2017. Founding member
  - Steering Committee Member. 2017-2022
  - 2019: 45 general members; 11 steering committee members; 2018: 50 general members, 10 steering committee; 2017: 50 general members; 12 steering committee members
- Hope in Christ Back to School Backpack Give Away Event: Faith based backpack give away that serves between 300-500 K-12 students.
  - Speaker. Every August 2017-2019; 2021
- Passion Academy: Sixth and seventh grade student of color career promotion program at Ames Middle School in Ames, Iowa, managed by faculty, staff, graduate and undergraduate students of color from Iowa State University. Founded in April 2016.
  - Director and developer of program. Spring 2017-Winter 2019
  - 2018-2019: 20 participants; 2017-2018: 50 participants; Spring 2016: 20 participants. Delayed due to COVID-19.

PROFESSSIONAL AND ACADEMIC MEMBERSHIP

- National Chair
  - 2018-Present: Chair/ Co-Chair of USDA Funded North Central Region Center for FSMA Training, Extension, and Technical Assistance
  - 2013-2020: Chair of FDA Funded North Central Region Center for FSMA Training, Extension, and Technical Assistance
  - 2011-2016; 2017-2022 S-294 USDA Multi State Research Project: Quality and Safety of Fresh-cut Vegetables and Fruits. Lead for Iowa State University (2013-2016; 2017-Present) President Elect (2013-2016)
- National Member
  - 2023-Present: Member of International Association for Food Protection Diversity, Equity, and Inclusion Council
  - 2020-2023: Inaugural Chair of International Association for Food Protection Diversity, Equity, and Inclusion Council
  - 2020-2021: Taskforce Member to develop a Diversity Equity and Inclusion Committee for International Association for Food Protection
  - 2020-Present: Member of International Association for Food Protection Program Committee
  - 2012-Present: Food Safety Preventive Controls Alliance
  - 2005-Present: Member of International Association for Food Protection
  - 2020-2021: Member of CEA (Controlled Environment Agriculture) Food Safety Coalition Advisory Council
  - 2010-2020: Member of The American Society for Microbiology
  - 2011-2022: Member of Egg Industry Center Advisory Board
  - 2006-2020 Member of Institute of Food Technologist
  - 2005-2019: American Meat Science Association
  - 2012-2019 NC-213 The U.S. Quality Grains Research Consortium

- State Member
  - 2022-present: Member of the Texas Department of Agriculture Produce Safety Team
  - 2022-present: Member of the Texas Food Safety & Defense Task Force
  - 2011-2022: Member of Iowa Food Safety Task Force
  - 2011-2018: Iowa Section Institute of Food Technologist (Past President, President, President Elect, Member at Large)
  - 2012-2017: Member of Regional Food System Working Group (RFSWG)
  - 2012-2016: Member of The Iowa Food System Working Group (IFSWG)

- Scientific Review Activities
  - 2017-Present: Foods
  - 2010-Present: Food Control
  - 2010-Present: Foodborne Pathogens and Disease
  - 2010-Present: Journal of Food Science
  - 2006-Present: Journal of Food Protection (editorial board 2018-2020)
  - 2019-2022: Elmer Marth Educator Award Committee (Chair 2021)
  - 2018-2022: Tenure and Promotion from Peer Institutions
  - 2008-2020: Meat Science

- Grant Proposal Review
  - 2020: USDA Value Added Producers Grants Program
  - 2017: USDA 1890 Facility Research
  - 2015: USDA Higher Education
  - 2014: USDA Higher Education
  - 2013: USDA 1890 Facility Research
  - 2013: USDA Non-Land Grant Institutions Reviewer
  - 2013: Baily Research Award ; University internal grant, Iowa State University
  - 2011: USDA SBIR Phase I reviewer

- Equity, Diversity and Inclusion Presentations
  - Shaw, A. 2020. Equity is Lifestyle not a Choice. Iowa State University Department of Agronomy. Diversity Seminar Series. February 25th, 2020. Ames, Iowa
  - Shaw, A. 2020. Equity Diversity and Inclusion Survey Consult. Iowa State University Department of Plant Pathology and Microbiology Diversity Equity and Inclusion Committee Meeting. June 16th, 2020. Virtual.
  - Shaw, A., and E. Johnsen. 2018. Passion Academy: Empowering Middle School Students of Color in Predominately White Schools. The Institute for the Study and Promotion of Race and Culture (ISPRC) 18th annual Diversity Challenge: Making Race and Culture Work in the STEM Era: Bringing All People to the Forefront. October 19-20th, 2018 at Boston College, Chestnut Hill, Massachusetts. https://www.bc.edu/content/dam/bc1/schools/lsoe/sites/isprc/Diversity%20Challenge/2018%20DC%20Abstracts.pdf

Professional Improvement Training

1. April 20-23rd, 2023: Faculty Women of Color in the Academy (Arlington, VA)
2. February 7th, 2023: Faculty of Color Success Fireside Chat (Lubbock, TX)
3. March 8th, 2023: H2O-Go: Helping Growers Meet Postharvest Agricultural Water Requirements by Produce Safety Alliance (Virtual)
4. January 27th, 2023: FDA Update on Subpart E Harvest and Postharvest Water Requirements: End of Enforcement Discretion by Produce Safety Alliance (Virtual)
5. January 18th, 2023: Building the House of Wellness (Lubbock, TX)
6. December 19th, 2022: FSMA Traceability Rule: Supplemental Slides for Grower Outreach by FDA Produce Safety Rule Group (Virtual)
7. November 29th, 2022: Research Leadership Discussion-Federal Grants disclosures (Lubbock, TX)
8. November 10th, 2022: Meet the Program Officers-HSI Programming Series (NSF) (virtual)
9. October 25th, 2022: Produce Safety Alliance Lead Trainer Annual Update (virtual)
10. October 24th, 2022: Building Interactive Elements into Your Produce Safety Training by Kristin Woods from Tuskegee University, Billy Mitchell, and Gretchen Wall from International Fresh Produce Association (Virtual)
11. October 19th, 2022: Juggling All the Things: Helping Faculty Balance Expectations (Lubbock, TX)
12. October 13th, 2022: USDA HSI Federal Resource Symposium (virtual)
13. October 19th-20th, 2022: Food Safety Preventive Control Annual Conference (virtual)
14. September 2022-May 2023: Faculty Fellows Davis College (Lubbock, TX)
15. August 22nd, 2022: Subpart E (Agricultural Water): New Proposed Compliance Dates, Thinking about Update Training, and Identifying Key Grower Needs by FDA Produce Safety Group (Virtual)
16. July 2022: International Association of Food Protection Conference (Pittsburgh, PA)
17. June 6th, 2022: The SCRUB Project: Up to Our Elbows in Suds and Bubbles by Chris Callahan at the University of Vermont (Virtual)
18. April 2022: Faculty Women of Color in the Academy (Arlington, VA)
19. October 2021: Food Safety Preventive Control Annual Conference (virtual)
20. Every March 2011 through 2019; 2021: Iowa State Conference on Race and Ethnicity (ISCORE) Conference (Ames, IA)
21. 2019-2020: Lead 21 program purpose is to develop leaders in land grant institutions and their strategic partners who link research, academics, and extension in order to lead more effectively in an increasingly complex environment, either in their current position or as they aspire to other positions (Minneapolis, Denver, Washington DC)
22. November 2020: Writing Successful Grants and Write Winning Grant Proposals
23. October 2020: Food Safety Preventive Control Annual Conference (virtual)
24. July 2020: International Association of Food Protection Conference (Virtual)
25. April 2020: Faculty Women of Color in the Academy (virtual)
26. February 2020: Just Mercy Book Read and Discussion (Ames, IA)
27. October 2019: Food Safety Preventive Control Annual Conference (virtual)
28. October 2019: Deaf Culture 2 Part Series (Ames, IA)
29. September 2019: Managing Abism (Ames, IA)

30. July 2019: International Association of Food Protection Conference (Louisville, KY)
31. May 2020: National Conference on Race and Ethnicity Conference (NCORE) Conference (Portland, Oregon)
32. February 2019: White Fragility with Dr. Robin DiAngelo (Ames, IA)
33. October 2018: Food Safety Preventive Control Annual Conference (virtual)
34. July 2018: International Association of Food Protection Conference (Salt Lake City, UT)
35. April 2018: Privileging the Privileged: How bias, power and privilege impact graduate school funding and admissions (Ames, IA)
36. April 2018: Cross cultural communication; creating mutual understanding in a diverse academic environment (Ames, IA)
37. March 2018: Train the Trainer On-Farm Readiness Review (Florida)
38. March 2018: "That's Not What I Meant": Understanding intent vs impact in an academic environment (Ames, IA)
39. September 2018: Managing Unconscious Bias: Strategies for the Classroom (Ames, IA)
40. October 2017: Food Safety Preventive Control Annual Conference (virtual)
41. October 2017: Breaking Bias (Ames, IA)
42. July 2017: International Association of Food Protection Conference (Tampa, FL)
43. July-August 2016: International Association of Food Protection Conference (St. Louis, Missouri)
44. October 2016: Writing Successful Grants and Write Winning Grant Proposals
45. October 2016: Creating an Inclusive Classroom (Ames, IA)
46. December 2016: Train the Trainer Produce Safety Alliance (Minneapolis, MN)
47. August 2015: Grant coach for FDA/NIH proposal
48. December 2015: Train the Trainer Food Safety Modernization Act Preventive Controls for Human Food (Minneapolis, MN)
49. November 2015: Annual Iowa Organic Conference (Iowa City, IA)
50. August 2015: Implementing SQF Systems (Des Moines, IA)
51. July 2015: International Association of Food Protection Conference (Portland, OR)
52. July 2015: IFT Strategic Leadership Conference (Chicago, IL)
53. July 2015: Institute for Food Technologist (Chicago, IL)
54. June 2015: S294 Conference/ United Fresh Produce Conference (Chicago, IL)
55. June 2015: Food Safety Preventive Control Train the Trainer (Bedford, IL)
56. October 2014: S1056 Enhancing Microbial Food Safety by Risk Analysis (San Juan, PR)
57. November 2014: Annual Iowa Organic Conference (Iowa City, IA)
58. April 2014: USDA AMR Group GAP Internal Auditor Training (LaFarge, WI)
59. April 2014: FDA Traceback Course (Clive, IA)
60. August 2013: 2013 Fruit and Vegetable field day (Horticulture Farm, Ames, IA)
61. July 2013: IFT Strategic Leadership Conference (Chicago, IL)
62. July 2013: Institute for Food Technologist (Chicago, IL)
63. July 2013: International Association of Food Protection Conference (Charlotte, NC)
64. May 2013: S294 Conference/ United Fresh Produce Conference (San Diego, CA)
65. April 2013: Annual Egg Industry Issues Forum (St. Louis, MO)
66. January 2013: FDA Risk Based Inspection Course (Fairgrounds, Des Moines, IA)

67. April 2012: FDA Foodborne Illness half day workshop (Gateway Hotel, Ames, IA)
68. April 2012: United Fresh Produce Conference (Dallas, TX)
69. March 2012: FDA Retail Food Program Standard 2 Training Regulatory Staff Workshop given by FDA (State Hygiene Laboratory at DMACC, Ankeny, IA)
70. March 2012: FDA 312 Special Processes at Retail Workshop given by FDA (State Hygiene Laboratory at DMACC, Ankeny, IA)
71. December 2011: Food Label and Food Legislation Seminar-Food Policy Conference given by IFT (Arlington, VA)
72. September 2012: Writing Successful Grants and Write Winning Grant Proposals
73. September 2011: College of Agriculture and Life Sciences New Faculty Orientation, Grants and Proposals Workshop
74. September 2011: "Ten Inexpensive Ways to Stimulate Proposal Development," a webinar by Dr. Robert Porter, Director of Research Development at the University of Tennessee
75. September 2011: Grant Writing Seminars: Basic principles and Submitting a grant to NSF and NIH

EXTENSION PROGRAMMING

Workshops Conducted

1. Biological soil amendments of animal origin workshop with US Food and Drug Administration
    a. 2019- 1 Course (50 participants)
2. Cleaning and Sanitation: Food Safety Basics workshop with US Food and Drug Administration
    a. 2022-1 Course (35 participants)
3. Food Microbiology for Industry-Short Course
    a. 2022 cancelled due to the university transfer
    b. 2019, 2020, and 2021 cancelled due to COVID-19 Pandemic
    c. 2017- 1 Course (25 participants)
    d. 2016- 3 Course (41 participants)
    e. 2015- 1 Course (25 participants)
4. Food Safety Modernization Act Preventive Controls for Human Food Course
    a. 2020 and 2021 no course due to COVID-19 Pandemic
    b. 2019- 2 Courses (46 participants)
    c. 2018- 1 Course (32 participants)
    d. 2017- 2 Course (101 participants)
    e. 2016- 3 Course (51 participants)
5. Food Safety Modernization Act Informational Webinars
    a. 2016- 5 Webinars (69 participants)
    b. 2016- 1 Half-Day Workshop (97 participants)

    c. 2016- 1 Full-Day Workshop (65 participants)
6. Food Safety Topic Driven Workshops
    a. 2015- GEAPS Distance Education Seminar through Kansas State (22 participants)
    b. 2015- 1 Lunch and Learn Workshop for Extension agents (20 participant)
    c. 2014- 1 Half Day Food Safety Workshop for food industry (22 participants)
    d. 2013- 1 Half Day Food Safety Workshop for food industry (50 participants)
    e. 2013- 2 Lunch and Learn Workshop for Extension agents (40 participants)
    f. 2012- 2 Farm Food Safety Full Day Short Course for growers (95 participants)
    g. 2012- 1 Half Day Workshop for food industry (55 participants)
    h. 2012- 2 Lunch and Learn Workshop for Extension agents (40 participants)
    i. 2012- Microbiology on the Farm Webinar Series for growers (102 participants)
    j. 2012- GEAPS Distance Education Seminar through Kansas State (25 participants)
    k. 2011- Four -1 Hour Workshop for food industry (200 participants)
7. Good Agricultural Practices
    a. 2018- Moved course online
    b. 2017- 5 Courses (50 participants)
    c. 2011-2016- 17 Courses (238 participants)
8. Hazard Analysis Critical Control Point for Non-Meat Industries Short Course
    a. 2015- 1 Course (30 participants)
    b. 2014- 1 Course (29 participants)
    c. 2013- 1 Course (31participants)
9. International Food Safety Program
    a. 2019-2021 cancelled due to COVID-19 Pandemic
    b. 2018- 1 Course (9 participants; China)
    c. 2016- 5 Course (62 participants; Philippians, Haiti, Armenian, Venezuela, Nigeria)
10. Market Ready Workshop (administrated by FEED Extension Program at ISU)
    a. 2020- Moved to online course
    b. 2019- Cancelled due to COVID-19 pandemic
    c. 2018- 1 Workshop (21 participants)
    d. 2015- 3 Workshops (56 participants)
    e. 2014- 2 Workshops (41 participants)
11. News and Blast Regional 1.5 Day Workshops: Produce Safety Educators Professional Development Event
    a. 2019-Minneapolis, MN (60 In-person; 30 Online participants)
    b. 2018-Detroit, MI (50 In-person; 20 Online participants)
12. Produce Safety Alliance for Produce Safety Alliance Grower Training
    a. 2021- 2 Remote Courses (19 participants)
    b. 2020- 8 Courses (140 participants)
    c. 2019- 12 Courses (211 participants)

   d. 2018- 12 Courses (231 participants)
   e. 2017- 4 Courses (73 participants)
   f. 2016- 1 Course (22 participants; Train the Trainer)
13. On Farm Food Safety Plan Development
   a. 2018- Course moved to FEED extension group for administration
   b. 2017- 2 Courses (86 participants)
   c. 2011-2016- 10 Courses (186 participants)
14. On-Farm Readiness Reviews
   a. 2020-2021- 2 In-Person in 2020; 10 In-Person and 3 Virtual Farms in 2021
   b. 2019-2020- 11 Farms
   c. 2018-2019- 10 Farms

Extension Online Curriculum Developed

1. North Central Region Produce Food Safety Curriculum
   a. https://www.ncrfsma.org/resources-topic
2. Online Food Safety Education for School Gardens
   a. http://www.safeproduce.cals.iastate.edu/elementary/
3. Online Food Safety Education for University Farms
   a. http://www.safeproduce.cals.iastate.edu/university/
4. Online Food Safety Education for Farmers Markets
   a. http://www.safeproduce.cals.iastate.edu/farmersmarket/

Extension Publications Download Data

1. FS 10 Make Food Safety a Priority at Your Farmers Market Booth (2016)
   a. Downloads: 2021-116 ; 2020-105; 2019- 107; 2018-127
2. FS 11 Make Food Safety a Priority for Your CSA (2016)
   a. Downloads: 2021- 369; 2020- 492; 2019- 886; 2018- 129
3. FS 24 Marketing Local Foods in Iowa - Whole Fruits and Vegetables (2018)
   a. Downloads: 2021- 64; 2020- 64; 2019- 24; 2018- 132
4. FS 29 Optimal Aronia Berry Harvest (2018)
   a. Downloads: 2021- 271; 2020- 144; 2019- 132; 2018- 40
5. FS 30 Checklist for Retail Purchasing of Local Produce (2018)
   a. Downloads: 2021- 215; 2020- 220; 2019- 230; 2018- 650
6. FS 31 Ensuring Food Safety: Wineries (2019)
   a. Download: 2021- 93; 2020- 50; 2019- 93
7. FS 32 Ensuring Food Safety in the Vineyard: Table Grapes (2019)
   a. Downloads: 2021- 68; 2020- 52; 2019- 27
8. FS 33 Ensuring Food Safety in the Vineyard: Wine Grapes (2019)
   a. Downloads: 2021- 33; 2020- 49; 2019- 22
9. FS 34 Reducing food safety risk on produce farm (2020)
   a. Downloads: 2021- 13; 2020- 14
10. FS 35A Reducing food safety risk on produce farm: Agricultural Water (2020)
   a. Downloads: 2021- 8; 2020- 13
11. FS 35B Reducing food safety risk on produce farm: Cleaning and Sanitizing (2020)

    a. Downloads: 2021- 12; 2020- 16
12. FS 35C Reducing food safety risk on produce farm: Handwashing (2020)
    a. Downloads: 2021- 12; 2020- 12
13. FS 35D Reducing food safety risk on produce farm: Worker Hygiene and Health (2020)
    a. Downloads: 2021- 9; 2020-12
14. FS 35E Reducing food safety risk on produce farm: Harvest and Post Harvesting Handling (2020)
    a. Downloads: 2021- 13; 2020- 15
15. FS 35F Reducing food safety risk on produce farm: Biological Soil Amendments of Animal Origin (2020)
    a. Downloads: 2021- 8; 2020-10
16. FS 36A Manager's Responsibility: Employees Reporting Foodborne Illness (2020)
    a. Downloads: 2021- 18; 2020- 7
17. FS 36B Employee Health and Personal Hygiene: Training for Employees (2020)
    a. Downloads: 2021- 37; 2020- 5
18. FS 37 Stocking and Rotation of Produce: Best Practices for Retail Employees (2020)
    a. Downloads: 2021- 52; 2020- 11
19. FS 37B Display Case Cleaning (2020)
    a. Downloads: 2021- 16; 2020- 4
20. FS 38 Handwashing (2020)
    a. Downloads: 2021- 28; 2020- 5
21. FS 44 FSMA Summary for Hops Growers (2020)
    a. Downloads: 2021- 15; 2020- 12
22. FS 45 Federal and State Regulations on Selling Fermented Food (2020)
    a. Downloads: 2021- 41; 2020- 8
23. FS 46 Federal and State Regulations on Selling Frozen and Dehydrated Foods (2020)
    a. Downloads: 2021- 31; 2020- 8
24. FS 47 Federal and State Regulations on Selling Jams and Jellies (2020)
    a. Downloads: 2021- 21; 2020- 6
25. FS 48 Federal and State Regulations on Selling Pickled Vegetables (2020)
    a. Downloads: 2021- 24; 2020- 6
26. HS 007 Leafy Green Safe Handling Posters (2014)
    a. Downloads: 2021- 163; 2020- 145; 2019- 163; 2018- 301
27. SP 0328 Garden Produce in Floods (2013)
    a. Downloads: 2021- No Longer Available; 2020- 123; 2019- 156; 2018- 177
28. PM 1974 a On-farm Food Safety: Guide to Good Agricultural Practices (GAPs) (2013)
    a. Downloads: 2021- 772; 2020- 510; 2019- 506; 2018- 890 (No longer available)
29. PM 1974 b On-farm Food Safety: Food Handling Guide (2013)
    a. Downloads: 2021- 473; 2020- 510; 2019- 506; 2018- 423 (No longer available)
30. PM 1974 c On-farm Food Safety: Cleaning and Sanitizing Guide (2013)
    a. Downloads: 2021- 839; 2020- 1232; 2019- 6317; 2018- 3992
31. PM 1974 d Guide to Liquid Sanitizer Washes with Fruit and Vegetables (2013)
    a. Downloads: 2021- 1223; 2020- 3518; 2019- 699; 2018- 415
32. PM 1974 e Food Pantry Produce Donations - Grower Information (2013)
    a. Downloads: 2021- 213; 2020- 216; 2019- 130; 2018- 195

Extension Webpages

Website	Unique Views	Views	Average time on page	Downloads
Iowa Produce Safety Safeproduce.cals.iastate.edu	2021: 1521 2020: 1873 2019: 5633 2018: 114 2017: 518	2021: 2372 2020: 2325 2019: 7555 2018: 136 2017: 542	2019: 1.44 min 2018: 1.15 min 2017: 1.32 min	2021: 104 2020: 268 2019: 3528 2018: 3,500 2017: 9,800
North Central for FSMA Training, Extension, and Technical Assistance Ncrfsma.org	2021: 1131 2020: 2087 2019: 1865 2018: 1200 2017: 835	2021: 1588 2020: 3252 2019: 3259 2018: 1500 2017: 865	2019: 2.54 min 2018: 0.02 min 2017: 0.57 min	2021: 297 2020: 702 2019: 344 2018: 7330 2017: -
Food Safety Innovations and Preventive Control Producefoodsafety.org	2021: 806 2020: 1268 2019: 674 2018: 306	2021: 995 2020: 1440 2019: 760 2018: 395	2019: 1.45 min 2018: 1.92 min	2021: 19 2020: 155 2019: 55 2018: 1076

Social Media Account

North Central Regional Food Safety Modernization Act (NCR FSMA) Facebook Page

	Likes	Total Reach	Shares
NCR FSMA	2021:156 2020: 144 2019: 124 2018: 57 2017: 60	2021: 52 2020: 13 2019: 2550 2018: 13.5 2017: 240	2021: 23 2020: 11 2019: 350 2018: 1 2017: 150