

CASSANDRA KATHERINE JONES

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EMPLOYMENT

- 2016 - Present Associate Professor, Coordinator of Undergraduate Research
Department of Animal Sciences & Industry
Kansas State University
Appointment: 80% teaching, 20% research
- 2016 - 2017 Assistant Professor, Coordinator of Undergraduate Research
Department of Animal Sciences & Industry
Kansas State University
Appointment: 80% teaching, 20% research
- 2012 - 2016 Assistant Professor of Feed Technology
Department of Grain Science & Industry
Kansas State University, Manhattan
Appointment: 40% research, 40% teaching, 20% outreach

EDUCATION

- 2012 Doctor of Philosophy in Nutritional Sciences (Swine Nutrition emphasis)
Iowa State University, Ames, Iowa
- 2009 Master of Science in Animal Science (Swine Nutrition emphasis)
Kansas State University, Manhattan, Kansas
- 2007 Bachelor of Science in Agriculture (Animal Sciences & Industry major)
Kansas State University, Manhattan, Kansas

RESEARCH

Peer-Reviewed Journal Publications (40)

1. Niederwerder, M.C., A.M.M. Stoian, R.R. Rowland, S.S. Dritz, V. Petrovan, L.A. Constance, J.T. Gebhardt, M. Olcha, **C.K. Jones**, J.C. Woodworth, Y. Fang, J. Liang, and T.J. Hefley. 2018. Infectious dose of African swine fever virus when consuming naturally in liquid and plant-based feed. *Emerg. Infect. Dis.* *Accepted*.
2. Yoder, A.D., **C.K. Jones**, K. Herrick, C.R. Stark, and C.B. Paulk. 2018. Effects of low oil DDGS on pellet quality and pellet mill motor electrical efficiency. *T. ASABE.* *In Press*.
3. Donadelli, R., **C.K. Jones**, R.S. Beyer, and G.C. Aldrich. 2018. The amino acid composition and protein quality of various egg, poultry meal by-products, and vegetable proteins used in the production of dog and cat diets. *J. Poult. Sci.* *In Press*
4. Gebhardt, J.T., R.A. Cochrane, J.C. Woodworth, **C.K. Jones**, M.C. Niederwerder, M.B. Muckey, C.R. Stark, M.D. Tokach, J.M. DeRouchey, R.D. Goodband, J. Bai, P.C. Gauger, Q. Chen, J. Zhang, R.G. Main, and S.S. Dritz. 2018. Evaluation of the effects of flushing feed manufacturing equipment with chemically treated rice hulls on porcine epidemic diarrhea virus (PEDV) cross contamination during feed manufacturing. *J. Anim. Sci.* 96(10):4149-4158.
5. Magossi, G., N. Cernicchiaro, S. Dritz, T. Houser, J. Woodworth, **C. Jones**, and V. Trinetta. 2018. Evaluation of Salmonella presence in selected United States feed mills. *MicrobiologyOpen.* e711.
6. Martinez, A., **C.K. Jones**, C.R. Stark, L.J. McKinney, K.C. Behnke, and C.B. Paulk. 2018. Evaluating flushing procedures to prevent nicrbazin carryover during medicated feed

- manufacturing. *J. Feed Sci. Technol.* 242:1-7.
7. Gebhardt, J.T., C.B. Paulk, J.A. DeJong, M.D. Tokach, J.C. Woodworth, J.M. DeRouchey, R.D. Goodband, K.F. Coble, C.R. Stark, **C.K. Jones**, and S.S. Dritz. 2018. Effect of roller mill configuration on growth performance of nursery and finishing pigs and milling characteristics. *J. Anim. Sci.* 96(6):2278-2292.
 8. Dee., S., F. Bauermann, M. Niederwerder, A. Singrey, T. Clement, M. DeLima, C. Long, G. Patterson, M. Shehan, A. Stoian, V. Petrovan, **C.K. Jones**, J. De Jong, J. Ji., G Spronk, J. Hennings, J. Zimmerman, B. Rowland, E. Nelson, P. Sundberg, D. Diel, and L. Minion. 2018. Survival of viral pathogens in animal feed ingredients under transboundary shipping models. *PLoS ONE.* 13(3): e0194509.
 9. Saensukjaroenphon, M., **C.K. Jones**, and C.R. Stark. 2018. The effect of extended mix times and sample preparation with different salt particles size on the uniformity of mix of a corn-soy swine diet. *T ASABE.* 61(2): 743-746.
 10. Williams, H.E., R.A. Cochrane, J.C. Woodworth, J.M. DeRouchey, S.S. Dritz, M.D. Tokach, **C.K. Jones**, S.C. Fernando, T.E. Burkey, Y.S. Li, R.D. Goodband, and R. Amachawadi. 2018. Effects of dietary supplementation of formaldehyde and crystalline amino acids on gut microbial composition of nursery pigs. *Nature Sci. Rep.* 8:8164-8171.
 11. Schumacher, L.L., R.A. Cochrane, A.R. Huss, C.R. Stark, J.C. Woodworth, J.F. Bai, E.L. Poulsen, Q. Chen, R.G. Main, J.Q. Zhang, P.C. Gauger, R.J. Derscheid, D.R. Magstadt, S.S. Dritz, and **C.K. Jones**. 2017. Characterizing the rapid spread of porcine epidemic diarrhea virus (PEDV) through an animal food manufacturing facility. *PLoS ONE.* 12(11):e0187309.
 12. Kalivoda, J.R., C.R. Stark, and **C.K. Jones**. 2017. Effect of ground corn fractionation on flow ability. *T ASABE.* 33(6):927-932.
 13. De Jong, J.A., J.M. DeRouchey, M.D. Tokach, R.D. Goodband, J.C. Woodworth, S.S. Dritz, C.R. Stark, **C.K. Jones**, H.C. Williams, and C.R. Paulk. 2017. Formation of pellet fines during the feed manufacturing process, transportation and feed line delivery, and nutrient composition. *T ASABE.* 33(6):921-926.
 14. Saensukjaroenphon, M. **C.K. Jones**, C. Fahrenholz, and C.R. Stark. 2017. The effect of water temperature, technician, extraction time, and dissolution time on the salt concentration by using QuanTab chloride titrator method. *T ASABE.* 60(5):1759-1763.
 15. De Jong, J.A., J.C. Woodworth, J.M. DeRouchey, R.D. Goodband, M.D. Tokach, S.S. Dritz, C.R. Stark, and **C.K. Jones**. 2017. Stability of four commercial phytase products under increasing thermal conditioning temperatures. *T Anim. Sci.* 1(3):255-260.
 16. Huss, A.R., J.C. Fuller, Jr., W. Centrella, D.L. Marshall, A. Deliphan, and **C.K. Jones**. 2017. Mitigation of *Salmonella* on pet food kibbles using liquid and powdered 3-hydroxy-3-methylbutyric acid. *J. Food Protec.* 80(7):1080-1084.
 17. Cochrane, R.A., L.L. Schumacher, S.S. Dritz, J.C. Woodworth, A.R. Huss, C.R. Stark, J.M. DeRouchey, M.D. Tokach, R.D. Goodband, J. Bai, Q. Chen, J. Zhang, P.C. Gauger, R.J. Derscheid, D.R. Magstadt, R.G. Main, and **C.K. Jones**. 2017. Effect of pelleting on survival of Porcine Epidemic Diarrhea Virus (PEDV)-contaminated feed. *J. Anim. Sci.* 95:1170-1178.
 18. Huss, A.R., L.L. Schumacher, R.A. Cochrane, E. Poulsen, J. Bai, J.C. Woodworth, S.S. Dritz, C.R. Stark, and **C.K. Jones**. 2017. Elimination of Porcine Epidemic Diarrhea Virus in an animal feed manufacturing facility. *PLoS ONE.* 12(1):e0169612.
 19. Kalivoda, J.R., **C.K. Jones**, and C.R. Stark. 2017. Impact of varying analytical methodologies on grain particle size determination. *J. Anim. Sci.* 95(1):113-119.
 20. De Jong, J.A., J.M. DeRouchey, M.D. Tokach, S.S. Dritz, R.D. Goodband, J.C. Woodworth, **C.K. Jones**, and C.R. Stark. 2016. Stability of commercial phytase sources under different environmental conditions. *J. Anim. Sci.* 94:4259-4266.
 21. Schumacher, L.L., J.C. Woodworth, **C.K. Jones**, Q. Chen, J. Zhang, P.C. Gauger, C.R. Stark, R.G. Main, R.A. Hesse, M.D. Tokach, and S.S. Dritz. 2016. Minimum infectious dose of porcine epidemic diarrhea virus in a feed matrix. *Amer. J. Vet. Res.* 77(10):1108-1113.

22. De Jong, J.A., R.D. Goodband, J.M. DeRouchey, M.D. Tokach, S.S. Dritz, J.C. Woodworth, **C.K. Jones**, and C.R. Stark. 2016. Effects of wheat source and particle size in meal and pelleted diets on finishing pig growth, carcass characteristics, and nutrient digestibility. *J. Anim. Sci.* 94:3303-3311.
23. Zhu, L., **C.K. Jones**, Q. Guo, L.L. Lewis, C.R. Stark, and S. Alavi. 2016. An evaluation of total starch and starch gelatinization methodologies in pelleted swine feed. *J. Anim. Sci.* 94:1501-1507.
24. Dee, S., C. Neill, T. Clement, E. Nelson, A. Singrey, J. Christopher-Hennings, **C.K. Jones**, R.A. Cochrane, G. Patterson, and G. Spronk. 2016. Modeling the transboundary risk of feed ingredients contaminated with porcine epidemic diarrhea virus. *BMC Vet. Rsrch.* 12:51-63.
25. Cochrane, R.A., S.S. Dritz, J.C. Woodworth, C.R. Stark, A.R. Huss, and C.K. Jones. 2016. Feed mill biosecurity plans: A systematic approach to prevent biological pathogens in swine feed. *J. Swine Health Prod.* 26(3):154-164.
26. Cochrane, R.A., A.R. Huss, G.C. Aldrich, C.R. Stark, and **C.K. Jones**. 2016. Evaluating chemical mitigation of *Salmonella typhimurium* in animal feed ingredients. *J. Food Protect.* 79(4):672-676.
27. Huss, A.R., R.A. Cochrane, C.R. Stark, and **C.K. Jones**. 2015. Evaluation of biological pathogen decontamination protocol for animal feed mills. *J. Food Protect.* 78(9):1682-1688.
28. Yoder, A.D., R.S. Beyer, and **C.K. Jones**. 2015. The effects of drought affected grain and carbohydrase inclusion in starter diets on broiler chick performance. *J. Appl. Poult. Sci.* 24:177.
29. Lewis, L.L., C.R. Stark, A.C. Fahrenholz, J.R. Bergstrom, and **C.K. Jones**. 2015. Evaluation of conditioning time and temperature on gelatinized starch and vitamin retention in a pelleted swine diet. *J. Anim. Sci.* 93:615-619.
30. Pilcher, C.M., **C.K. Jones**, M. Schroyen, A.J. Severin, J.F. Patience, C.K. Tuggle, and J.E. Koltes. 2015. Transcript profiles in longissimus dorsi muscle and subcutaneous adipose tissue: A comparison of pigs with different post-weaning growth rates. *J. Anim. Sci.* 93:2134-2143.
31. **Jones, C.K.**, E.L. Frantz, A. Bingham, J.R. Bergstrom, J.M. DeRouchey, and J.F. Patience. 2015. Effects of drought-affected corn and non-starch polysaccharide enzyme inclusion on nursery pig growth performance. *J. Anim. Sci.* 93:1703-1709.
32. Lewis, L.L., C.R. Stark, A.C. Fahrenholz, M.A.D. Goncalves, J.M. DeRouchey, and **C.K. Jones**. 2015. Effects of pelleting conditioner retention time on nursery pig growth performance. *J. Anim. Sci.* 93:1098-1102.
33. **Jones, C.K.**, M.D. Tokach, J.L. Usry, C.R. Neill, and J.F. Patience. 2014. Evaluating lysine requirements of nursery pigs fed low protein diets with different sources of non-essential amino acids. *J. Anim. Sci.* 92:3460-3470.
34. **Jones, C.K.**, D.M. Madson, R.G. Main, N. K. Gabler, and J.F. Patience. 2014. Poor weaning transition ADG is not correlated with pathological or immunological markers of enteric disease during a PRRSV outbreak. *J. Anim. Sci.* 92:2568-2577.
35. **Jones, C.K.**, and J.F. Patience. 2014. Variation in nutrient digestibility and energy intake are key contributors to differences in post-weaning growth performance. *J. Anim. Sci.* 92:2105-2115.
36. **Jones, C.K.**, N. K. Gabler, R.G. Main, and J.F. Patience. 2012. Characterizing growth and carcass composition differences in pigs with varying weaning weights and post-weaning performance. *J. Anim. Sci.* 90:4072-4080.
37. Sulabo, R.C., **C.K. Jones**, M.D. Tokach, R.D. Goodband, S.S. Dritz, D.R. Campbell, B.W. Ratliff, J.M. DeRouchey, and J.L. Nelssen. 2011. Factors affecting storage stability of various commercial phytase sources. *J. Anim. Sci.* 89:4262-4271.
38. **Jones, C.K.**, M.D. Tokach, S.S. Dritz, B.W. Ratliff, N.L. Horn, R.D. Goodband, J.M. DeRouchey, R.C. Sulabo, and J.L. Nelssen. 2010. Efficacy of different commercial phytase enzymes and development of an available phosphorus release curve for *Escherichia coli*-derived phytases in nursery pigs. *J. Anim. Sci.* 88:3631-3644.
39. **Jones, C.K.**, J.R. Bergstrom, M.D. Tokach, J.M. DeRouchey, R.D. Goodband, J.L. Nelssen, and S.S. Dritz. 2010. Efficacy of commercial enzymes in diets containing various concentrations and sources of dried distillers grains with solubles for nursery pigs. *J. Anim. Sci.* 88:2084-2091.
40. **Jones, C.K.**, J.M. DeRouchey, J.L. Nelssen, M.D. Tokach, S.S. Dritz, and R.D. Goodband. 2010.

Effects of fermented soybean meal and specialty animal protein sources on nursery pig performance. *J. Anim. Sci.* 88:1725-1732.

Inventions

1. **Jones, C.K.**, R.A. Cochrane, J.C. Woodworth, S.S. Dritz. Chemical mitigants in animal feed and feed ingredients. U.S. Patent Application No. WO2016081716A1, International Application Number PCT/US2015/061564.
2. M. Niederwerder, **C.K. Jones**, S. S. Dritz, R. Rowland, J.C. Woodworth. Inactivation of viruses such as African Swine Fever Virus (ASFV) and Classical Swine Fever Virus (CSFV) with medium chain fatty acids. Provisional U.S. Patent No. 62/637,825.

Peer-Reviewed Abstracts or Proceedings (109)

1. Stewart, S.S. and **C.K. Jones**. 2019. Environmental monitoring of Enterobacteriaceae can be used to determine weaknesses in feed mill biosecurity for porcine viruses. European Symposium of Porcine Health Management. *Accepted*.
2. **Jones, C.K.**, M. Niederwerder, J. Woodworth, and S. Dritz. 2019. Investigating feed and feed mill risks. American Association of Swine Veterinarians Annual Meeting. *Submitted*.
3. **Jones, C.K.** 2019. Undergraduate research experiences improve critical thinking ability of animal science students. Midwest ASAS Meeting. *Accepted*.
4. Stewart, S.C., M.C. Niederwerder, J.C. Woodworth, S.S. Dritz, and **C.K. Jones**. 2019. Effect of swab type on detection of PEDV from feed manufacturing surfaces. Midwest ASAS Meeting. *Accepted*.
5. Sorensen, R.J., S.C. Stewart, **C.K. Jones**, A.R. Crane, T.G. Nagaraja, and J.M. Lattimer. 2019. Efficacy of corn dried distillers grains with solubles as a replacement for soybean meal in a Boer goat diet. Midwest ASAS Meeting. *Accepted*.
6. Neufeld, M., R.J. Sorensen, J.M. Lattimer, A.R. Crane, and **C.K. Jones**. 2019. Impact of protein or chloride source on Boer goat carcass characteristics. Midwest ASAS Meeting. *Accepted*.
7. Royce, A.L., R.J. Sorensen, J.M. Lattimer, A.R. Crane, and **C.K. Jones**. 2019. Impact of protein or chloride source on Boer goat growth performance. Midwest ASAS Meeting. *Accepted*.
8. Ney, S.P., V. Petrovan, S.C. Stewart, S. Davis, M.C. Niederwerder, V. Trinetta, S.S. Dritz, J.C. Woodworth, R.R. Rowland, C.B. Paulk, and **C.K. Jones**. 2019. Prevalence and distribution of Senecavirus A in United States swine feed mills. Midwest ASAS Meeting. *Accepted*.
9. Sardella, C.A., V. Petrovan, S.C. Stewart, S. Davis, M.C. Niederwerder, V. Trinetta, S.S. Dritz, J.C. Woodworth, R.R. Rowland, C.B. Paulk, and **C.K. Jones**. 2019. Validation of environmental swabbing to detect Senecavirus A in feed. Midwest ASAS Meeting. *Accepted*.
10. Rodriguez, D.A., S.A. Less, M.B. Muckey, **C.K. Jones**, and H.H. Stein. 2019. Digestibility of amino acids, fiber, and energy, and concentrations of digestible and metabolizable energy in conventional and extruded yellow dent corn, wheat, and sorghum fed to growing pigs. Midwest ASAS Meeting. *Accepted*.
11. Nichols, G.E., C.R. Stark, **C.K. Jones**, J.C. Woodworth, R.S. Beyer, C.J. Defelder, M.B. Braun, H.K. Wecker, C.E. Evans, and C.B. Paulk. 2019. The effects of medium chain fatty acids in mash and pelleted diets on growth performance of broilers. International Poultry Scientific Forum. *Accepted*.
12. Stoian, A.M.M., V. Petrovan, M.A. Sheahan, S.A. Dee, D.G. Diel, **C.K. Jones**, R.R.R. Rowland, and M.C. Niederwerder. 2019. Survival of African swine fever virus (ASFV) in feed ingredients under transboundary shipping conditions. North American PRRSV Symposium. *Accepted*.
13. **Jones, C.K.**, J.C. Woodworth, S.S. Dritz, and M.C. Niederwerder. 2018. Feed mill biosecurity. Iowa State University James D. McKean Swine Disease Conference. Ames, IA.
14. Paine, J.M., **C.K. Jones**, J.M. Lattimer, and A.R. Crane. 2018. Impact of including distillers' dried grains with solubles at the expense of soybean meal on Boer-influenced goat growth performance. *T. Anim. Sci.* 2(1)S93.

15. Boccato, G.M., N. Cernicchiaro, S. Dritz, J. Woodworth, **C. Jones**, T. Houser, and V. Trinetta. 2018. Seasonal prevalence of *Salmonella* Typhimurium and its monophasic variant serovar I 4,[5],12:i:-, in United States feed mills. International Association of Food Protection.
16. Kufaul, T., U. Yucel, A. McDaniel, G. Boccato, **C. Jones**, and V. Trinetta. 2018. Effects of different moisture and temperature on *Samonella* survival in poultry fat. International Association of Food Protection. 81(A):25.
17. **Jones, C.K.** and G. Hock. 2018. Evaluation of undergraduate student critical thinking in animal and food sciences. North American Colleges and Teachers of Agriculture Conference.
18. Schmidt, D.L. and **C.K. Jones**. 2018. Food safety compliance readiness of Kansas pet food manufacturers. J. Anim. Sci. 96(E2)494.
19. Ney, S.P., A.J. Staggs, M.E. Muckey, and **C.K. Jones**. 2018. Variables impacting sanitation efficacy in University swine barns. J. Anim. Sci. 96(E2)495.
20. Tischhauser, L.M., A.D. Yoder, and C.K. Jones. 2018. Effects of cleaning corn on nursery pig growth performance. J. Anim. Sci. 96(E2)496.
21. Yoder, A.D., C.R. Stark, J.M. DeRouchey, M.D. Tokach, and **C.K. Jones**. 2018. Mechanically cleaning corn reduces fumonisin concentration. Midwest ASAS Meeting.
22. Sylvester, E.W., R.A. Cochrane, R.G. Amachawadi, S. Remfry, A.B. Lerner, T.G. Nagaraja, J. Pluske, M.C. Niederwerder, C.B. Paulk, C.R. Stark, J.C. Woodworth, S.S. Dritz, M.D. Tokach, J.M. DeRouchey, R.D. Goodband, and **C.K. Jones**. 2018. Defining the minimum inhibitory concentration of synthetic and commercial medium chain fatty acid based products against *Salmonella* Typhimurium. J. Anim. Sci. 96(E2)503.
23. Smith, A.L., C.J. Delfelder, C.R. Stark, C.E. Evans, A.D. Yoder, C.B. Paulk, R.S. Beyer, and **C.K. Jones**. 2018. Effects of monensin sodium and xylanase on broiler growth performance. J. Anim. Sci. 96(E2)493.
24. Wecker, H.K., A.D. Yoder, **C.K. Jones**, J.C. Woodworth, C.R. Stark, and C.B. Paulk. 2018. The effects of moisture addition and dwell time of moisture on pellet quality in corn and wheat based diets. J. Anim. Sci. 96(E2)516.
25. Yoder, A.D., C.R. Stark, J.M. DeRouchey, M.D. Tokach, and **C.K. Jones**. 2018. Effect of cleaning corn on mycotoxin concentration. Midwest ASAS Meeting.
26. Gebhardt, J.T., J.C. Woodworth, M.D. Tokach, J.M. DeRouchey, R.D. Goodband, **C.K. Jones**, and S.S. Dritz. 2018. Medium chain fatty acid mitigation activity against porcine epidemic diarrhea virus (PEDV) in nursery pig diets after 40 d of storage. Midwest ASAS Meeting.
27. **Jones, C.K.** 2018. Practical strategies to maintain feed safety. Midwest ASAS Meeting.
28. Nichols, G.E., C.M. Vier, A.B. Lerner, M.B. Menegat, H.S. Cemin, **C.K. Jones**, J.M. DeRouchey, M.D. Tokach, R.D. Goodband, J.C. Woodworth, and S.S. Dritz. 2018. Effects of standardized ileal digestible lysine on 7-15 kg nursery pigs growth performance. J. Anim. Sci. 96(E2)483.
29. Swanson, A.J., R.A. Cochrane, R.G. Amachawadi, S. Remfry, A.B. Lerner, T.G. Nagaraja, J. Pluske, M.C. Niederwerder, C.R. Stark, C.B. Paulk, J.C. Woodworth, S.S. Dritz, M.D. Tokach, J.M. DeRouchey, R.D. Goodband, and **C.K. Jones**. 2018. Determination of the minimum inhibitory concentration of various medium chain fatty acid-based products in *E. coli*, Enterotoxigenic *E. coli*, and *Campylobacter coli*. J. Anim. Sci. 96(E2)482.
30. Jendza, J.A., A. Huss, **C. Jones**, M.R. Abdollahi, and L. Hall. 2018. Effect of feed acidification and conditioning temperature on feed hygiene and *Salmonella* recovery from mash and pelleted broiler feed. Australian Poultry Science Symposium.
31. M.E. Morts, G. Aldrich, **C.K. Jones**, and S. Beyer. 2017. An evaluation of the protein quality of various protein sources from chicken, whey, and soy concentrates commonly used in pet diets and select human performance foods. J. Anim. Sci. 95(E4)116.
32. D. Seitz, C. Delfelder, A. Yoder, **C. Jones**, and R. Beyer. 2017. The effects of conditioning temperature and particle size of grain sorghum on the performance of male broiler chicks during the starter phase. J. Poult. Sci. 96(E1)507.

33. **Jones, C.K.** 2017. Impact of student demographics on confidence of critical thinking proficiency. North American Colleges and Teachers of Agriculture Conference. NACTA. 61(1):0088.
34. Boccato, G.M., N. Cernicchiaro, S.S. Dritz, T. Houser, J.C. Woodworth, **C.K. Jones**, and V. Trinetta. 2017. Investigation of the prevalence and distribution of *Salmonella* in United States feed mills. International Association for Food Protection. J. Food Protect. 80(A):95.
35. Cochrane, R.A., S.S. Dritz, J.C. Woodworth, A.R. Huss, C.R. Stark, M. Saesukjaroenphon, J.M. DeRouchey, M.D. Tokach, R.D. Goodband, J.F. Bai, Q. Chen, J. Zhang, P.C. Gauger, R.J. Dersheid, R.G. Main, and **C.K. Jones**. 2017. Assessing the effects of medium chain fatty acids and fat sources on PEDV RNA stability and infectivity. J. Anim. Sci. 95(E5)196.
36. Muckey, M.B., A.D. Yoder, R.A. Cochrane, A.R. Huss, S.S. Dritz, J.C. Woodworth, and **C.K. Jones**. 2017. Evaluating the roles of surface sanitation and feed sequencing on mitigating *Salmonella* Enteritidis contamination on animal food manufacturing equipment. J. Anim. Sci. 95(E5)256.
37. Muckey, M.B., R.A. Cochrane, J.C. Woodworth, S.S. Dritz, C.R. Stark, A.D. Yoder, J.F. Bai, J. Zhang, P.C. Gauger, R.G. Main, and **C.K. Jones**. 2017. Using environmental swabbing to quantify the effectiveness of chemical disinfectant to reduce the quantity of Porcine Epidemic Virus RNA on feed manufacturing surfaces. J. Anim. Sci. 95(E5)255.
38. Yoder, A.D., M.B. Muckey, and **C.K. Jones**. 2017. Evaluating pellets produced on three distinct pellet mill series. J. Anim. Sci. 95(E5)263.
39. Yoder, A.D., M.B. Muckey, C.R. Stark, H.H. Stein, and **C.K. Jones**. 2017. Determining starch gelatinization from grains collected at various locations within the extrusion process. J. Anim. Sci. 95(E5)267.
40. Gehhardt, J.T., J.C. Woodworth, **C.K. Jones**, M.D. Tokach, J.M. DeRouchey, R.D. Goodband, J.R. Bergstrom, J.F. Bai, Q. Chen, J. Zhang, P.C. Gauger, R.J. Dersheid, D.R. Magstadt, P.H. Arruda, A. Ramirez, R.G. Main, and S.S. Dritz. 2017. Evaluating the efficacy of commercial feed additives as potential Porcine Epidemic Diarrhea Virus (PEDV) mitigation strategies in complete fed and spray-dried porcine plasma as determined by polymerase chain reaction analysis and bioassay. J. Anim. Sci. 95(E5)100. *First Place Ph.D. Oral Presentation*.
41. J.T. Gebhardt, J.C. Woodworth, **C.K. Jones**, P.C. Gauger, M.D. Tokach, J.M. DeRouchey, R.D. Goodband, M. Muckey, R.A. Cochrane, M. Niederwerder, C.R. Stark, J. Bai, Q. Chen, J. Zhang, R.A. Jianqiang, R.J. Derscheid, R.G. Main, and S.S. Dritz. 2017. Evaluation of the Effects of Flushing Feed Manufacturing Equipment with Chemically- Treated Rice Hulls on Porcine Epidemic Diarrhea Virus Cross Contamination During Feed Manufacturing. Annual American Association of Swine Veterinarians Meeting. Poster09.
42. Molnar, L.M., C.G. Aldrich, R.S. Beyer, R. Dake, and **C.K. Jones**. 2016. The effect of source and drying process on amino acid composition and protein quality of dried poultry used in high quality pet diets and select human foods. J. Anim. Sci. 94(E5)421.
43. Donadelli, R.A., C.G. Aldrich, **C.K. Jones**, R.S. Beyer, and R. Dake. 2016. The amino acid composition and protein quality of various popular poultry and vegetable proteins commonly used in the production of dog and cat diets. J. Anim. Sci. 94(E5)422.
44. Dee, S., C. Neill, T. Clement, A. Singrey, J. Christopher-Hennings, E. Nelson, G. Spronk, G. Patterson, R. Cochrane, and **C.K. Jones**. 2016. Modeling the transboundary risk of feed ingredients contaminated with porcine epidemic diarrhea virus. International Pig Veterinary Society Congress.
45. Muckey, M.B., A.R. Huss, and **C.K. Jones**. 2016. The evaluation of surface disinfectants to reduce *Salmonella* contamination on animal food manufacturing surfaces. J. Anim. Sci. 94(E2)168.
46. Kalivoda, J.R., **C.K. Jones**, and C.R. Stark. 2016. Effects of grain particle size and separation fraction on ground corn flowability. J. Anim. Sci. 99(E2)167.
47. De Jong, J.A., J.M. DeRouchey, M.D. Tokach, R.D. Goodband, J.C. Woodworth, **C.K. Jones**, C.R. Stark, H.E. Williams, L. McKinney, G. Smith, and B. Haberl. 2016. Effects of feed truck

- unloading and swine barn feed line location on pellet quality and nutrient segregation. American Society of Animal Science Midwest Meeting. J. Anim. Sci. 99(E2)166.
48. De Jong, J.A., J.M. DeRouche, M.D. Tokach, R.D. Goodband, J.C. Woodworth, **C.K. Jones**, C.R. Stark, C.L. Bradley, J.A. Loughmiller, and J.R. Bergstrom. 2016. Stability of commercial phytase products under increasing thermal conditioning temperatures. J. Anim. Sci. 99(E2)214.
 49. De Jong, J.A., J.M. DeRouche, M.D. Tokach, R.D. Goodband, J.C. Woodworth, **C.K. Jones**, C.L. Bradley, J.A. Loughmiller, and J.R. Bergstrom. 2016. Stability of commercial phytase products stored under different environmental conditions. J. Anim. Sci. 99(E2)241.
 50. Huss, A.R., L.L. Schumacher, R.A. Cochrane, E. Poulsen, J. Bai, J.C. Woodworth, S.S. Dritz, C.R. Stark, and **C.K. Jones**. 2016. Proof-of-concept methods to sanitize a feed mill contaminated with Porcine Epidemic Diarrhea Virus. J. Anim. Sci. 99(E2)217.
 51. Huss, A.R., A. Deliephan, J.C. Fuller, and **C.K. Jones**. 2016. Coating dog kibble with a commercial liquid acidifier reduces the risk of *Salmonella* cross-contamination. J. Anim. Sci. 99(E2)216.
 52. Cochrane, R.A., M. Saesukjaroenphon, S.S. Dritz, J.C. Woodworth, A.R. Huss, C.R. Stark, J.M. DeRouche, R.D. Goodband, J. Bai, Q. Chen, J. Zhang, P.C. Gauger, R.G. Main, and **C.K. Jones**. 2016. Evaluating the inclusion level of medium chain fatty acids to reduce the risk of PEDV in feed and spray-dried animal plasma. J. Anim. Sci. 99(E2)107.
 53. Schumacher, L.L., R.A. Cochrane, C.E. Evans, J.R. Kalivoda, J.C. Woodworth, C.R. Stark, **C.K. Jones**, Q. Chen, R.G. Main, J. Zhang, P.C. Gauger, S.S. Dritz, and M.D. Tokach. 2016. Evaluating the effect of manufacturing porcine epidemic diarrhea virus (PEDV)-contaminated feed on subsequent feed mill environmental surface contamination. J. Anim. Sci. 99(E2)164.
 54. Schumacher, L.L., R.A. Cochrane, J.C. Woodworth, C.R. Stark, **C.K. Jones**, Q. Chen, R.G. Main, J. Zhang, P.C. Gauger, S.S. Dritz, and M.D. Tokach. 2016. Utilizing feed sequencing to decrease the risk of porcine epidemic diarrhea virus (PEDV) cross-contamination during feed manufacturing. J. Anim. Sci. 99(E2)163.
 55. Gebhardt, J.T., M.D. Tokach, J.C. Woodworth, J.M. DeRouche, R.D. Goodband, K.F. Coble, C.R. Stark, **C.K. Jones**, and S.S. Dritz. 2016. Effects of grinding corn through a 2-, 3-, or 4-high roller mill on milling characteristics, finishing pig growth performance, and carcass characteristics. J. Anim. Sci. 99(E2)126.
 56. Gebhardt, J.T., J.A. De Jong, M.D. Tokach, J.C. Woodworth, J.M. DeRouche, R.D. Goodband, K.F. Coble, C.R. Stark, **C.K. Jones**, and S.S. Dritz. 2016. Effects of grinding corn through a 2-, 3-, or 4-high roller mill on pig performance and feed preference of nursery pigs. J. Anim. Sci. 99(E2)215.
 57. Sica, L.G., R.A. Cochrane, J.C. Woodworth, S.S. Dritz, C.R. Stark, and **C.K. Jones**. 2016. Effects of commercial formaldehyde inclusion and lysine level on pig performance of nursery pigs. J. Anim. Sci. 99(E2)410.
 58. Jeffrey, A.M., G.C. Aldrich, A.R. Huss, C. Knueven, and **C.K. Jones**. 2016. Effect of a dry acidulant coating on the palatability of dry extruded dog food. J. Anim. Sci. 99(E2)242.
 59. Zamora, D.F., A.R. Huss, and **C.K. Jones**. 2016. The effects of a dry acidulant on *Salmonella* contamination in poultry feed. Emerging Researchers National Conference in STEM. 2016:29.
 60. Cochrane, R.A., L.L. Schumacher, S.S. Dritz, J.C. Woodworth, **C.K. Jones**, A.R. Huss, C.R. Stark, J.M. DeRouche, M.D. Tokach, R.D. Goodband, J.F. Bai, Q. Chen, J.Q. Zhang, P.C. Gauger, and R.G. Main. 2016. Effect of thermal mitigation of Porcine Epidemic Diarrhea Virus. American Association of Swine Veterinarians Annual Meeting.
 61. Dee, S., C. Neil, A. Singrey, R. Cochrane, **C. Jones**, J. Christopher-Hennings, and E. Nelson. 2016. Modelling transboundary risk of PEDV: introduction of the virus to the US from China via contaminated feed ingredients in the presence or absence of treatment. American Association of Swine Veterinarians Annual Meeting.
 62. Huss, A.R., M.B. Muckey, A. Deliephan, G.C. Aldrich, and C.K. Jones. 2015. Rendered animal fats as a potential carrier of *Salmonella* into pet food and animal feeds: a preliminary study. AR

Association of Food Protection Symposium.

63. Muckey, M.B., A.R. Huss, C. Knueven, and C.K. Jones. 2015. Preliminary research evaluating a dry granular product for decontamination of *Salmonella* in pet food and feed manufacturing facilities. AR Association of Food Protection Symposium.
64. Jeffrey, A.M., **C.K. Jones**, C.G. Aldrich, A.R. Huss, and C. Knueven. 2015. Time and dry acidulant substantially reduce *Salmonella* concentration in extruded dog food. J. Anim. Sci. 91(E2)504.
65. Cochrane, R.A., A.R. Huss, and **C.K. Jones**. 2015. Evaluating the efficacy of chemicals to mitigate *Salmonella* cross contamination in rendered protein meals. J. Anim. Sci. 91(E2)787.
66. Huss, A.R., R.A. Cochrane, A. Deliephan, C.R. Stark, and **C.K. Jones**. 2015. Reduction of biological hazards in animal feed mills via a decontamination protocol. J. Anim. Sci. 91(E2)T172..
67. Jeffrey, A.M., **C.K. Jones**, C.G. Aldrich, A.R. Huss, and C. Knueven. 2015. Identifying sources of *Salmonella* contamination in animal feed and pet food facilities.. Anim. Sci. 91(E2)W95.
68. Yoder, A.D., G.E. Bokelman, and **C.K. Jones**. 2015. Effects of corn particle size and diet form on nursery pig growth performance. J. Anim. Sci. 91(E2)T74.
69. Saensukjaroenphon, M., C. Fahrenholz, **C.K. Jones**, D. Stone, I. Parsons, and C.R. Stark. 2015. Effect of salt particle size and extended mixing times on the mixing uniformity of a corn-soy swine diet. J. Anim. Sci. 91(E2)282.
70. Mooney, A., C.G. Aldrich, **C.K. Jones**, and S.Alavi. 2015 The effect of processing and elevated storage temperature on Omega-3 fatty acid stability in pet food. J. Anim. Sci. 91(E2)W103.
71. Kalivoda, J.R., **C.K. Jones**, and C.R. Stark. 2015. Effect of sieving methodology on determining particle size of ground corn, sorghum, and wheat by sieving. J. Anim. Sci. 91(E2)123.
72. Gray, M., C.G. Aldrich, **C.K. Jones**, and M. Gibson. 2015. The impact of rendered protein meal level of oxidation on shelf life and acceptability in extruded pet foods. J. Anim. Sci. 91(E2)W105.
73. Tribble, S.D., C.G. Aldrich, and **C.K. Jones**. 2015. Effects of thiamin type, species meat versus livers, and sulfite addition on water-soluble B-vitamins in a canned cat diet. J. Anim. Sci. 91(E2)W97.
74. Schumacher, L.L., J.C. Woodworth, J. Zhang, P.C. Gauger, R.G. Main, S.S. Dritz, R.A. Cochrane, and **C.K. Jones**. 2015. Determining the minimum infectious dose of Porcine Epidemic Diarrhea Virus in a feed matrix. J. Anim. Sci. 93(E2)160.
75. **Jones, C.K.**, C.R. Stark, S.S. Dritz, A.R. Rigdon, and J.C. Woodworth. 2015. Recent research into feed processing and biosafety. J. Anim. Sci. 932(E2)161.
76. Cochrane, R., S. S. Dritz, J. C. Woodworth, and **C. K. Jones**. 2015. Evaluating chemical mitigation of PEDv in swine feed and ingredients. J. Anim. Sci. 92(E2)090.
77. Bokelman, G. E., K. F. Coble, C. R. Stark, J. C. Woodworth, M. D. Tokach, S. Alavi, and **C. K. Jones**. 2015. Using extreme thermal processing to improve nutrient utilization of diets for finishing pigs. J. Anim. Sci. 92(E2)142.
78. Jeffrey, A. M., **C. K. Jones**, C. G. Aldrich, A. Rigdon, and C. Kneuve. 2015. Effects of dry acidulant coating on Salmonella contamination in commercial kibble. J. Anim. Sci. 92(E2)417.
79. Cochrane, R., C. R. Stark, A. R. Huss, C. G. Aldrich, C. J. Knueven, J. Pitts, and **C. K. Jones**. 2015. Biological pathogen mitigation in animal feed using a dry acid powder. J. Anim. Sci. 92(E2)089.
80. Vesco, A.C., **C.K. Jones**, L.C. Grimes, T.H. Fountain, B.R. Faris, and A.K. Sexten. 2015. Determining growth performance implications on meat goat kids fed soybean hull or corn based pelleted diets. J. Anim. Sci. 92(E2)054.
81. Acosta, J. A., S. Gould, **C. K. Jones**, C. R. Stark, and J. F. Patience. 2015. Impact of particle size and grinding method on apparent total tract digestibility of energy in grower and finisher pigs. J. Anim. Sci. 92(E2)141.
82. De Jong, J. A., J. M. DeRouchey, M. D. Tokach, R. D. Goodband, S. S. Dritz, C. B. Paulk, J. C. Woodworth, **C. K. Jones**, and C. R. Stark. 2015. Effects of wheat source and particle size in

- pelleted diets on finishing pig growth performance and caloric efficiency. *J. Anim. Sci.* 92(E2)308.
83. De Jong, J. A., J. M. DeRouche, M. D. Tokach, R. D. Goodband, J. C. Woodworth, **C. K. Jones**, C. R. Stark, J. A. Erceg, and L. McKinney. 2015. Formation of fines during the pelleted feed manufacturing process and the resulting differences in nutrient composition of fines and pellets. *J. Anim. Sci.* 92(E2)140.
 84. Mathe, S.L., C.W. Starkey, and **C.K. Jones**. 2015. Evaluating the correlation between water activity and percentage moisture in rendered protein meals. *International Poultry Scientific Forum*. P243.
 85. Zhu, L., L. L. Lewis, **C. K. Jones**, Y. C. Shi, and S. Alavi. 2014. A comparative study on two testing methods for degree of gelatinization in pelleted swine feed. *American Association of Cereal Chemists International Annual Meeting*. Accepted.
 86. DeNoya, S., C. G. Aldrich, and **C. K. Jones**. 2014. Effects of processing on water soluble B-vitamins in a canned cat diet. *J. Anim. Sci.* 92(E2)0183.
 87. Gray, M., C. G. Aldrich, and **C. K. Jones**. 2014. Evaluation of common analysis methods for oxidation in rendered protein meals used to produce pet foods. *J. Anim. Sci.* 92(E2)0186.
 88. Mooney, A., C. G. Aldrich, **C. K. Jones**, and S. Alavi. 2014. The effect of extrusion and elevated storage temperatures on vitamin retention in pet food. *J. Anim. Sci.* 92(E2)0182.
 89. Simmons, A., T. Zhou, M. Remund, T. Putarov, S. Alavi, C. G. Aldrich, **C. K. Jones**, and E. Maichel. 2014. Use of gelatin as a strengthening agent in dry extruded pet food. *J. Anim. Sci.* 92(E2)0978.
 90. Yoder, A. D., C.W. Ross, **C.K. Jones**, A.C. Bingham, R.S. Beyer, and C.G. Aldrich. 2014. Implications of drought stress on corn or sorghum utilization in broiler chicks. *J. Anim. Sci.* 92(E2)243.
 91. Lewis, L.L., **C.K. Jones**, A.C. Fahrenholz, C.R. Stark, M.A. Gonclaves, and J.M. DeRouche. 2014. Effects of conditioning motor speed and diet form on growth performance of 12-21 kg nursery pigs. *J. Anim. Sci.* 92(E2)157.
 92. Bokelman, G.E., J.R. Kalivoda, **C.K. Jones**, M.D. Tokach, J.M. DeRouche, and C.R. Stark. 2014. Effects of corn particle size and diet form on growth performance of 6-22 kg nursery pigs. *J. Anim. Sci.* 92(E2)158.
 93. Frantz, E., H.L. Frobose, J.M. DeRouche, M.D. Tokach, R.D. Goodband, J.R. Bergstrom, and **C.K. Jones**. 2014. Effects of drought-affected corn and non-starch polysaccharide enzymes on nursery pig performance. *J. Anim. Sci.* 92(E2)234.
 94. Pilcher, C.M., **C.K. Jones**, M. Schroyen, J.E. Koltjes, A.J. Severin, J.F. Patience, and C.K. Tuggle. 2014. Gene expression profiling of longissimus dorsi and adipose tissue in pigs with differing post-weaning growth rate. *J. Anim. Sci.* 92(E2)110.
 95. Hancock, J.D., M.E. Morts, R.S. Beyer, and **C.K. Jones**. 2013. Maintaining High Quality Swine and Poultry Diets with Non-Traditional Ingredients. *J. Anim. Sci.* 91(E2)504.
 96. **Jones, C.K.**, D.M. Madson, R.G. Main, N.K. Gabler, and J.F. Patience. 2012. Periweaning failure to thrive syndrome in nursery pigs is associated with gastrointestinal lesions, but not enteric pathogens. *J. Anim. Sci.* 90(E3)580.
 97. **Jones, C.K.**, N.K. Gabler, and J.F. Patience. 2012. Porcine periweaning failure to thrive syndrome is driven by poor appetite and nutrient digestibility, but not ileal morphology or absorptive capacity. *XII International Symposium on Digestive Physiology of Pigs Program and Book of Abstracts*. p. 55-56.
 98. **Jones, C.K.** and J.F. Patience. 2012. Post-weaning transition ADG can serve as a tool to manage within-barn variation. *J. Anim. Sci.* 90(E1)184.
 99. **Jones, C.K.**, J.A. Acosta, M.D. Tokach, J.L. Usry, C.R. Neill, and J.F. Patience. 2011. Feed efficiency of 7- to 16-kg pigs is maximized when additional Lys is supplied by L-Lys-HCl instead of intact protein, but is not affected when diets are supplemented with differing sources of NEAA nitrogen. *J. Anim. Sci.* 89(E1)439.

100. **Jones, C.K.**, R.G. Main, N.K. Gabler, and J.F. Patience. 2011. Both weaning weight and post-weaning growth performance affect nutrient digestibility and energy utilization in pigs. *J. Anim. Sci.* 89(E2)131.
101. **Jones, C.K.**, N.K. Gabler, R.G. Main, and J.F. Patience. 2011. Irrespective of differences in weaning weight, feed efficiency is not different among pigs with varying average daily gain. *J. Anim. Sci.* 89(E2)81.
102. Patience, J.F., A.L. Chipman, and **C.K. Jones**. 2011. Impact of a fermented soybean meal product and/or a candida utilis yeast product on nutrient utilization and growth performance of weanling pigs. *J. Anim. Sci.* 89(E2)112.
103. Patience, J.F., A.L. Chipman, **C.K. Jones**, and T. Scheer. 2011. Varying corn particle size distribution affects the digestibility of energy for the growing pig. *J. Anim. Sci.* 89(E2)127.
104. Pilcher, C.M., A. Greco, C.R. Hurburgh, G.P. Munkvold, **C.K. Jones**, and J.F. Patience. Determining the energy digestibility of mold-damaged corn selected for low mycotoxin content in finishing pigs. *J. Anim. Sci.* 89(E1)755.
105. **Jones, C.K.**, M.D. Tokach, R.D. Goodband, S.S. Dritz, D.R. Campbell, B.W. Ratliff, J.M. DeRouchey, and J.L. Nelssen. 2010. Stability of various commercial phytase sources. *J. Anim. Sci.* 88(E3)117.
106. **Jones, C.K.**, M.D. Tokach, B.W. Ratliff, N.L. Horn, S.S. Dritz, R.D. Goodband, J.M. DeRouchey, and J.L. Nelssen. 2009. Efficacy of varying phytase levels and development of a P release curve. *J. Anim. Sci.* 87(E3)65.
107. **Jones, C.K.**, J.M. DeRouchey, J.L. Nelssen, M.D. Tokach, S.S. Dritz, and R.D. Goodband. 2009. Effects of PepSoyGen (PSG) and Dried Porcine Solubles 50 (DPS 50) on nursery pig performance. *J. Anim. Sci.* 87(E3)101.
108. **Jones, C.K.**, J.R. Bergstrom, M.D. Tokach, J.M. DeRouchey, J.L. Nelssen, S.S. Dritz, and R.D. Goodband. 2009. Effects of commercial enzymes in diets containing dried distillers' grains with solubles (DDGS) on nursery pig performance. *J. Anim. Sci.* 87(E3)83.
109. **Benz, C.K.**, M.D. Tokach, C.J. Groesbeck, S.S. Dritz, R.D. Goodband, J.L. Nelssen, J.M. DeRouchey. 2006. A Comparison of Bygholm Feed Sieve to standard particle-size analysis techniques. *J. Anim. Sci.* 84(E2)52.

Awarded Grants, Gifts, and Contracts (\$6.1 million total; \$2.0 million. as PI)

Primary investigator

1. A validated method to test bulk feed products and applying it to monitoring shipments for pathogen contamination. Swine Health Information Center 2018-2019.
2. Inspection smarts - Best practices for FSMA animal food inspections. Fats and Proteins Research Foundation. 2017-2018.
3. Effect of conditioning temperature and pellet diameter on nursery pig growth performance. National Pork Board Swine Research and Education Experience. 2017-2018.
4. Dr. Mark and Kim Young Undergraduate Research Fund in Animal Sciences and Industry. 2017-2022.
5. Validation of a low-cost tool for Senecavirus A detection, and surveillance of viral prevalence in United States feed mills. Swine Health Information Center. Co-PI: M. Niederwerder, V. Trinetta, J. Woodworth, C. Paulk, R. Rowland, S. Dritz. 2017-2018.
6. Assessing the role of medium chain fatty acids as an alternative to medically-important antibiotics. National Pork Board. Co-PI: R. Cochrane, T.G. Nagaraja, R. Amachawadi, M. Tokach, M. Niederwerder, J. Woodworth, S. Dritz, C. Paulk, and C. Stark. 2017-2018.
7. Role of feed antimicrobial replacement on broiler growth and performance. Koch Industries, Inc. Research and Creative Inquiry Project. 2016-2017.
8. Role of moisture addition on pellet quality in finishing pig feed. National Pork Board Swine Research and Education Experience. Co-PI: C. Stark. 2016-2017.
9. Assessing the effects of medium chain fatty acids and fat sources on PEDV infectivity. National

- Pork Board. Co-PI: R. Cochrane, A. Huss, J. Woodworth, S. Dritz, C. Stark, R. Goodband, M. Tokach, J. DeRouche. 2016-2017.
10. Compilation of a Food Safety Preventive Controls Animal Food Training Curriculum. United States Department of Health and Human Services. Co-PI: C. Stark and B. Miller. 2015-2018.
 11. Evaluation of Amasil NA and pelleting to mitigate *Salmonella* in a broiler diet. BASF Corporation. Co-PI: C. Stark. 2015-2016.
 12. Evaluating the effects of conditioning temperature and probiotic levels on resulting probiotic stability. Kay Dee, LLC. Co-PI: C. Stark. 2015-2016.
 13. Evaluating the effects of Magnesium-Mica on pellet quality and aflatoxin concentration in animal feeds. Micro-Lite, LLC. Co-PI: C. Stark. 2015-2016.
 14. Creation of a Porcine Epidemic Diarrhea Virus factsheet for pork producers. National Pork Board. 2015-2016.
 15. Preliminary evaluation of a chemical additive to mitigate *Salmonella* in kibble. Metabolic Technologies, Inc. Co-PI: A. Huss. 2015-2016. Organization and development of an online curriculum to train qualified individuals based on content adapted from the current Rendering Code of Practice. National Renderers Association. Co-PI: B. Miller. 2015-2017.
 16. Evaluating the effects of pelleting temperature on enzyme stability. Dyadic International, Inc. 2015-2016.
 17. Evaluating alternative chemical mitigants to prevent PEDv recontamination of swine feed and ingredients. United States Department of Agriculture and National Pork Board Joint Funding Directive. Co-PI: C. Stark, A. Huss, R. Main, P. Gauger, J. Zhang, J. Woodworth, M. Tokach, and S. Dritz. 2015-2016.
 18. Feed and petfood safety and global competitiveness of U.S. Grain and Feed. USDA National Institute of Food and Agriculture. Co-PI: G. Aldrich, R. Ambrose, D. Maier, J. DeRouche, and M. Tokach. 2012-2017.
 19. Developing video training modules for feed mill biosecurity from Porcine Epidemic Diarrhea Virus. PIC International. Co-PI: S. Dritz, J. Woodworth, and C. Stark. 2014-2015.
 20. Evaluating the effects of betaGRO on broiler growth performance and breast meat yield. NUTRIQUEST. Co-PI: C. Stark, R. Beyer. 2014-2015.
 21. Post-contamination chemical mitigation strategies to control PEDv in feed and feed ingredients. National Pork Board. Co-PI: M. Tokach, C. Stark, J. Bai, R. Hesse, and S. Dritz. 2014-2015.
 22. Evaluating the use of long-term conditioning or extrusion to extract nutrients from low energy feedstuffs. National Pork Board. Co-PI: C. Stark, M. Tokach, J. Woodworth, J. DeRouche. 2014-2015.
 23. Start-up validation of the Cargill Feed Safety Research Center. College of Agriculture. Co-PI; C. Stark. 2014-2015.
 24. Assessing the efficacy of chemical treatment to control *Salmonella* in rendered protein meals. Fats and Proteins Research Foundation. Co-PI: G. Aldrich, A. Rigdon. 2014-2015.
 25. Food safety inspection – training for bulk agricultural product handling and processing. United States Health & Human Services Food & Drug Administration. Co-PI: D. Maier, L. McKinney. 2012-2014. (PI during FY13 and FY14).
 26. Effects of HP 300 on pelletability and pellet quality in early swine diets. Hamlet Proteins. Co-PI: C. Stark. 2013-2014.
 27. Evaluating the effects of Novasil Plus on pelletability and pellet quality in early swine diets. BASF. Co-PI: C. Stark. 2013-2014.
 28. Strategies for eliminating *Salmonella* in animal feeds. Jones-Hamilton. Co-PI: G. Aldrich, K. Channaiah. 2012-2014.
 29. Determining the stability and homogeneity of Amasil NA for regulatory approval in United States swine and poultry feed. BASF. 2012-2013.
 30. Demonstrating the improved profitability of cereal grains during drought conditions to the poultry industry through further processing and Roxazyme G2 enzyme inclusion. DSM Nutritional

Products. 2012-2013.

Co-investigator

1. Providing undergraduate research opportunities through the evaluation of quality grade influences on beef top sirloin cap (biceps femoris) eating quality. Tyson Fresh Meats. PI: T. O'Quinn. 2018-2019.
2. Evaluating the impact of varying protein source and ammonium chloride inclusion on feedlot goat growth and carcass traits. Dairy Nutrition Plus. PI: A. Crane. 2018-2019.
3. Utilizing undergraduate research to evaluate DDGS as a replacement for soybean meal in Boer goat grower rations. Kansas Corn Commission. 2018-2019. PI: A. Crane. 2018-2019.
4. Converting distiller's grains to high-value healthy natural antioxidants. PI: Y. Li. Co-PI: **C. Jones**, G. Aldrich. Kansas Corn Commission. 2018-2019.
5. Understanding ecology and distribution of Shiga toxin-producing *Escherichia coli* O157 and Non- O157 in US swine feed mills. PI: V. Trinetta. Co-PI: **C. Jones**, T.G. Nagaraja, R. Phebus, J. Woodworth. National Pork Board. 2018-2019.
6. Assessing the effects of MCFA on PEDV quantity and infectivity. Purina Animal Nutrition LLC. PI: J. Woodworth. Co-PI: **C. Jones** and S. Dritz. 2017-2018.
7. Assessing tools for the mitigation of foreign animal disease introduction and transmission in feed. Swine Health Information Center. PI: M. Niederwerder. Co-PI: **C. Jones**, J. Woodworth, M. Tokach, R. Rowland, and S. Dritz. 2017-2018.
8. Evaluation of the risk of transboundary movement of ASFV via contaminated feed ingredients. PI: M. Niederwerder. Co-PI: **C. Jones**, J. Woodworth, M. Tokach, R. Rowland, and S. Dritz.
9. Assessing the risk of African swine fever virus (ASFV) transmission in feed. National Pork Board. PI: M. Niederwerder. Co-PI: **C. Jones**, J. Woodworth, M. Tokach, T. Hefley, R. Rowland, S. Dritz. 2017-2018.
10. Converting distiller's grains to high-value healthy natural antioxidants. PI: Y. Li. 2017-2018.
11. Assessing factors affecting Salmonella in poultry fat. Fats and Proteins Research Foundation. PI: V. Trinetta. Co-PI: **C. Jones**, G. Aldrich.
12. From feed to meat: investigation of the prevalence and distribution of *Salmonella* enterica serotype I 4,[5], 12:i:- a pathogen of interest in pork. National Pork Board. PI: V. Trinetta. Co-PI: T. Houser, J. Woodworth, **C. Jones**, S. Dritz, and N. Cernicchiaro. 2016-2017.
13. AMPLIFIES Ghana: Assisting management in the poultry and layer industries by feed improvement and efficiency strategies in Ghana. PI: C. Stark. Co-PI: **C. Jones**, C. Campabadal. 2015-2019.
14. Assessing PEDV infectivity of samples collected from a PEDV contaminated feed. National Pork Board and Iowa State University. PI: P. Gauger. Co-PI: J. Woodworth, **C. Jones**, S. Dritz, R. Main, and J. Zhang. 2015-2016.
15. Evaluating the effects of chemical treatments to reduce the likelihood of PEDV transmission by feed manufacturing equipment. National Pork Board. PI: J. Woodworth. Co-PI: **C. Jones**, S. Dritz, C. Stark, R. Goodband, M. Tokach, J. DeRouchey. 2015-2016.
16. Feed and Dairy Student Team – China. U.S. Soybean Export Council. PI: C. Campabadal Teran. Co-PI: M. Brouk, B. Miller, H. O'Neil, C. Stark, and **C. Jones**. 2015-2016.
17. Determining the impact of Vevovital and/or CRINA as potential PEDv mitigation strategies as determined by PCR analysis and bioassay. DSM Nutritional Products. PI: J. Woodworth, Co-PI: S. Dritz, **C. Jones**, J. DeRouchey, M. Tokach, B. Goodband.
18. Novel feed processing methods of cold pelleting and find ground corn segregation to maximize feed efficiency, nutrient utilization, and economic return. National Pork Board. PI: C. Stark. Co-PI: **C. Jones**, J. DeRouchey, J Woodworth, M. Tokach, A. Huss, and K. Ambrose. 2015-2016.
19. Improving wireless access to livestock teaching and research facilities. Kansas State University

- Academic Excellence Fund. PI: M. Tokach. Co-PI: D. Davis, J. Stevenson, J. Drouillard, C. Carson, **C. Jones**, and S. Dritz. 2014-2015.
20. Utilizing feed sequencing as a biosecurity intervention for preventing PEDV cross contamination in the feed manufacturing process. National Pork Board. PI: J. Woodworth. Co-PI: C. Stark, R. Main, J. Zhang, **C. Jones**, P. Gauger, S. Dritz, and M. Tokach.
 21. Swine teaching and research center feeders equipment grant. Kansas State University Academic Excellence Fund. PI: J. DeRouchey. Co-PI: M. Tokach, **C. Jones**, and S. Dritz. 2014-2015.
 22. Determining the impact of conditioning time and temperature in pelleted diets on PEDv. National Pork Board. PI: J. Woodworth. Co-PI: M. Tokach, J. DeRouchey, R. Goodband, **C. Jones**, C. Stark, R. Hesse, and S. Dritz. 2014-2015.
 23. Should producers invest in 2-high, 3-high, or 4-high roller mills? National Pork Board. PI: M. Tokach. Co-PI: J. Woodworth, J. DeRouchey, R. Goodband, C. Stark, **C. Jones**, and S. Dritz. 2014-2015.
 24. Introducing new profit streams for grain sorghum: milling characteristics and inclusion considerations for use in pet foods. United Sorghum Checkoff Program. PI: G. Aldrich. Co-PI: F. Churchill, **C. Jones**, C. Miller, and J. Hancock. 2013-2015.
 25. Continuing expansion of the Department of Grain Science and Industry's Distance Learning Program – Stand Alone Minor Programs. Division of Continuing Education. PI: H. Dogan. Co-PI: J. Faubion, D. Krishock, M. Moore, K. Ambrose, and **C. Jones**. 2012-2014
 26. Evaluating moderate to severe feed processes in light of increasing use of wheat in swine diets. National Pork Board. PI: M. Tokach. Co-PI: C. Paulk, J. De Jong, J. DeRouchey, **C. Jones**, and R. Goodband. 2013-2014.
 27. Maximizing Kansas soybean utilization by determining the economic and growth implications when including soy hulls and soybean meal in pelleted growing kid diets. Kansas Soybean Commission. PI: B. Faris. Co-PI: A. Sexten, **C. Jones**. 2013-2014.
 28. Cochran Program on Animal Production and Management. USDA. PI: C. Campabadal. Co-PI: **C. Jones**, D. Maier, and C. Stark. 2013-2014.
 29. Evaluation of techniques used to extend shelf-life and methods for analysis of rendered protein meals in pet foods. Fats and Proteins Research Foundation. PI: G. Aldrich. Co-PI: **C. Jones**, L. McKinney, and R. Ambrose. 2012-2014.
 30. Development of an online training course for advanced feed safety and associated quality protocols. American Feed Industry Association. PI: B Miller. Co-PI: **C. Jones**, C. Campabadal, and H. Cook. 2012-2013.

Books, Book Chapters, and Factsheets

1. Huss, A., R. Cochrane, **C. Jones**, and G.G. Atungulu. *Physical and chemical methods for the reduction of biological hazards in animal feeds*. In: *Food and Feed Safety Systems and Analysis*. S.C. Ricke, G.G. Atungulu, C.E. Rainwater, and S.H. Park, eds. Cambridge, MA: Elsevier Academic Press, 2018. Print.
2. Huss, A., R. Cochrane, M. Muckey, and **C. Jones**. *Animal feed mill biosecurity: Prevention of biological hazards*. In: *Food and Feed Safety Systems and Analysis*. S.C. Ricke, G.G. Atungulu, C.E. Rainwater, and S.H. Park, eds. Cambridge, MA: Elsevier Academic Press, 2018. Print.
3. *Preventive Controls for Animal Food Participant Manual, Instructor Manual, and Exercise Workbook v1.1*. **Jones, C.K.**, C.R. Stark, B.M. Miller, and A.C. Fahrenholz, eds. Illinois: Food Safety Preventive Controls Alliance, 2017. Electronic.
4. *Preventive Controls for Animal Food Participant Manual, Instructor Manual, and Exercise Workbook v1.0*. **Jones, C.K.**, C.R. Stark, B.M. Miller, and A.C. Fahrenholz, eds. Illinois: Food Safety Preventive Controls Alliance, 2016. Electronic.
5. Cochrane, R.A. and **C.K. Jones**. *The Role of PEDV in Feed: Current Knowledge and Understanding*. National Pork Board. Des Moines, IA: In-House Publishing, 2016. Print.
6. *Feed Pelleting Reference Guide*. **Jones, C.K.**, C.R. Stark, and A.C. Fahrenholz, eds. Illinois:

WATT Ag Net, 2014. Electronic.

7. Neil, C.R., J.M. DeRouche, and **C.K. Jones**. Feed Manufacturing. In: *PIC Nutrient Specifications Manual 2013*. PIC USA. Hendersonville, TN: In-House Publishing, 2013. Print.

EXTENSION/OUTREACH

Extension Publications (42)

1. Cochrane, R.A., R.G. Amachawadi, S.E. Remfry, A.B. Lerner, T.G. Nagaraja, J.C. Woodworth, S.S. Dritz, M.D. Tokach, M.C. Niederwerder, and **C.K. Jones**. 2018. Determining the minimum inhibitory concentration of medium chain fatty acids for generic *Escherichia coli*, *Enterotoxigenic coli*, *Salmonella Typhimurium*, and *Campylobacter coli*. 2018 Kansas State University Swine Day. *KS Agric. Exp. Stn. Res.* 4:9.
2. Cochrane, R.A., J.R. Pluske, J.P. Mansfield, S.S. Dritz, J.C. Woodworth, M.D. Tokach, M.C. Niederwerder, C.B. Paulk, and **C.K. Jones**. 2018. Evaluating medium chain fatty acids as an alternative to chlortetracycline in nursery pig diets. 2018 Kansas State University Swine Day. *KS Agric. Exp. Stn. Res.* 4:9.
3. Nichols, G.E., C.M. Vier, A.B. Clark, M.B. Menegat, H.S. Cemin, **C.K. Jones**, J.M. DeRouche, M.D. Tokach, R.D. Goodband, J.C. Woodworth, and S.S. Dritz, 2017. Effects of standardized ileal digestible lysine on 15- to 25-lb nursery pigs. 2017 Kansas State University Swine Day. *KS Agric. Exp. Stn. Res.* 3:7.
4. Gebhardt, J.T., J.C. Woodworth, M.D. Tokach, J.M. DeRouche, R.D. Goodband, **C.K. Jones**, and S.S. Dritz. 2017. Quantifying medium chain fatty acid mitigation activity over time against porcine epidemic diarrhea virus in nursery pig diets. 2017 Kansas State University Swine Day. *KS Agric. Exp. Stn. Res.* 3:7.
5. C.E. Evans, M. Saensukjaroenphon, **C.K. Jones**, J.M. DeRouche, J.C. Woodworth, M.D. Tokach, C.B. Paulk, and C.R. Stark. 2017. The effects of cold pelleting and separation of fine corn particles on growth performance and economic return in nursery pigs. 2017 Kansas State University Swine Day. *KS Agric. Exp. Stn. Res.* 3:7.
6. M. Saensukjaroenphon, C.E. Evans, K.H. Sheldon, **C.K. Jones**, and C.R. Stark. 2017. The effect of hammermill screen hole diameter and hammer tip speed on particle size and flowability of ground corn. 2017 Kansas State University Swine Day. *KS Agric. Exp. Stn. Res.* 3:7.
7. A.D. Yoder, M.D. Tokach, J.M. DeRouche, C.B. Paulk, C.R. Stark, and **C.K. Jones**. 2017. Cleaning reduces mycotoxin contamination in corn. 2017 Kansas State University Swine Day. *KS Agric. Exp. Stn. Res.* 3:7.
8. R.A. Cochrane, S.S. Dritz, J.C. Woodworth, A.R. Huss, C.R. Stark, M. Saensukjaroenphon, J.M. DeRouche, M.D. Tokach, R.D. Goodband, J. Bai, Q. Chen, J. Zhang, P.C. Gauger, R.J. Derscheid, D.R. Magstadt, P.E. Arruda, A. Ramirez, R.G. Main, and **C.K. Jones**. 2016. Evaluating the Inclusion Level of Medium Chain Fatty Acids to Reduce the Risk of Porcine Epidemic Diarrhea Virus in Complete Feed and Spray-Dried Animal Plasma. 2016 Kansas State University Swine Day. *KS Agric. Exp. Stn. Res.* 2:8.
9. R.A. Cochrane, S.S. Dritz, J.C. Woodworth, A.R. Huss, C.R. Stark, M. Saensukjaroenphon, J.M. DeRouche, M.D. Tokach, R.D. Goodband, J. Bai, Q. Chen, J. Zhang, P.C. Gauger, R.J. Derscheid, R.G. Main, and **C.K. Jones**. 2016. Assessing the Effects of Medium Chain Fatty Acids and Fat Sources on Porcine Epidemic Diarrhea Virus Viral RNA Stability and Infectivity. 2016 Kansas State University Swine Day. *KS Agric. Exp. Stn. Res.* 2:8.
10. J.T. Gebhardt, J.C. Woodworth, **C.K. Jones**, P.C. Gauger, M.D. Tokach, J.M. DeRouche, R.D. Goodband, M. Muckey, R.A. Cochrane, M. Niederwerder, C.R. Stark, J. Bai, Q. Chen, J. Zhang, R.A. Jianqiang, R.J. Derscheid, R.G. Main, and S.S. Dritz. 2016. Evaluation of the Effects of Flushing Feed Manufacturing Equipment with Chemically- Treated Rice Hulls on Porcine Epidemic Diarrhea Virus Cross Contamination During Feed Manufacturing. 2016 Kansas State University Swine Day. *KS Agric. Exp. Stn. Res.* 2:8.

11. J.T. Gebhardt, J.C. Woodworth, **C.K. Jones**, M.D. Tokach, J.M. DeRouchey, R.D. Goodband, R.A. Cochrane, C.R. Stark, J. Bergstrom, P.C. Gauger, J. Bai, Q. Chen, J. Zhang, R.G. Main, and S.S. Dritz. 2016. Evaluating the Impact of VevoVital and/or CRINA as Potential Porcine Epidemic Diarrhea Virus Mitigation Strategies as Determined by Polymerase Chain Reaction Analysis and Bioassay. 2016 Kansas State University Swine Day. KS Agric. Exp. Stn. Res. 2:8.
12. M.E. Muckey, S.S. Dritz, J.C. Woodworth, C.R. Stark, J. Bai, J. Zhang, P.C. Gauger, R.G. Main, and **C.K. Jones**. 2016. Porcine Epidemic Diarrhea Virus Surface Decontamination Strategies Using Chemical Sanitizing to Reduce the Quantity of PEDV RNA on Feed Manufacturing Surfaces with Environmental Swabbing. 2016 Kansas State University Swine Day. KS Agric. Exp. Stn. Res. 2:8.
13. M. Saensukjaroenphon, **C.K. Jones**, C.H. Fahrenholz, and C.R. Stark. 2016. Effect of Sample Preparation and Extended Mix Times with Different Salt Particle Sizes on the Uniformity of Mix of a Corn-Soybean Meal Swine Diet. 2016 Kansas State University Swine Day. KS Agric. Exp. Stn. Res. 2:8.
14. M. Saensukjaroenphon, M., **C.K. Jones**, C.H. Fahrenholz, and C.R. Stark. 2016. The Effect of Liquid Application Times, and Mixer Types with Different Wet Mix Times on Uniformity of Mix. 2016 Kansas State University Swine Day. KS Agric. Exp. Stn. Res. 2:8.
15. Bokelman, G.E., K.F. Coble, C.R. Stark, J.C. Woodworth, M.D. Tokach, and **C.K. Jones**. Evaluation of extreme thermal processing methods to improve nutrient utilization of low-energy diets for finishing pigs. 2015 Kansas State University Swine Day. KS Agric. Exp. Stn. Res. 1:7.
16. Bokelman, G.E., J.A. De Jong, J.R. Kalivoda, A.D. Yoder, C.R. Stark, J.C. Woodworth, and **C.K. Jones**. Finley grinding cereal grains in pelleted diets offers little improvement in nursery pig growth performance. 2015 Kansas State University Swine Day. KS Agric. Exp. Stn. Res. 1:7.
17. Bokelman, G.E., S.C. Stewart, A.L. Baldrige, J.C. Woodworth, S.S. Dritz, J.R. Kalivoda, C.R. Stark, and **C.K. Jones**. Evaluating the accuracy of the 3-sieve particle size analysis method compared to the 12-sieve method. 2015 Kansas State University Swine Day. KS Agric. Exp. Stn. Res. 1:7.
18. Cochrane, R.A., L.G. Sica, J.C. Woodworth, S.S. Dritz, C.R. Stark, and **C.K. Jones**. Effects of commercial formaldehyde inclusion and Lys level on pig performance of 35- to 50-lb nursery pigs. 2015 Kansas State University Swine Day. KS Agric. Exp. Stn. Res. 1:7.
19. Cochrane, R.A., S.S. Dritz, J.C. Woodworth, A.R. Huss, C.R. Stark, R.A. Hesse, J. Zhang, M.D. Tokach, J.F. Bai, and **C.K. Jones**. Evaluating chemical mitigation of Porcine Epidemic Diarrhea Virus in Swine Feed and Ingredients. 2015 Kansas State University Swine Day. KS Agric. Exp. Stn. Res. 1:7.
20. Cochrane, R.A., L.L. Schumacher, S.S. Dritz, J.C. Woodworth, A.R. Huss, C.R. Stark, J.M. DeRouchey, M.D. Tokach, R.D. Goodband, J. Bia, Q. Chen, J. Zhang, P.C. Gauger, R.G. Main, and **C.K. Jones**. Effect of thermal mitigation of Porcine Epidemic Diarrhea Virus-Contaminated Feed. 2015 Kansas State University Swine Day. KS Agric. Exp. Stn. Res. 1:7.
21. Schumacher, L.L., R.A. Cochrane, J.C. Woodworth, C.R. Stark, **C.K. Jones**, R.G. Main, J. Zhang, P.C. Gauger, S.S. Dritz, and M.D. Tokach. Utilizing feed sequencing to decrease the risk of Porcine Epidemic Diarrhea Virus cross-contamination during feed manufacturing. 2015 Kansas State University Swine Day. KS Agric. Exp. Stn. Res. 1:7.
22. Schumacher, L.L., R.A. Cochrane, J.C. Woodworth, C.R. Stark, **C.K. Jones**, R.G. Main, J. Zhang, P.C. Gauger, S.S. Dritz, and M.D. Tokach. Evaluating the effect of manufacturing PEDV-contaminated feed on subsequent feed mill environmental surface contamination. 2015 Kansas State University Swine Day. KS Agric. Exp. Stn. Res. 1:7.
23. Schumacher, L.L., R.A. Cochrane, J.C. Woodworth, C.R. Stark, **C.K. Jones**, R.G. Main, J. Zhang, P.C. Gauger, S.S. Dritz, and M.D. Tokach. Determining the minimum infectious dose of Porcine Epidemic Diarrhea Virus in a Feed Matrix. 2015 Kansas State University Swine Day. KS Agric. Exp. Stn. Res. 1:7.
24. Kalivoda, J.R., **C.K. Jones**, and C.R. Stark. Effects of varying methodologies on grain particle

- size analysis. 2015 Kansas State University Swine Day. KS Agric. Exp. Stn. Res. 1:7.
25. Gebhardt, J.T., K.F. Coble, M.D. Tokach, J.M. DeRouche, R.D. Goodband, J.C. Woodworth, C.R. Stark, **C.K. Jones**, and S.S. Dritz. Effects of grinding corn through a 2-, 3-, or 4-high roller mill on milling characteristics, and finishing pig growth performance and carcass characteristics. 2015 Kansas State University Swine Day. KS Agric. Exp. Stn. Res. 1:7.
 26. Gebhardt, J.T., J.A. De Jong, M.D. Tokach, J.C. Woodworth, J.M. DeRouche, R.D. Goodband, K.F. Coble, C.R. Stark, **C.K. Jones**, and S.S. Dritz. Effects of grinding corn through a 2-, 3-, or 4-high roller mill on pig performance and feed preference of 25- to 50-lb nursery pigs. 2015 Kansas State University Swine Day. KS Agric. Exp. Stn. Res. 1:7.
 27. De Jong, J.A., J.M. DeRouche, B. Habert, H. Williams, M.D. Tokach, R.D. Goodband, J.C. Woodworth, S.S. Dritz, C.R. Stark, L. McKinney, **C.K. Jones**, and D. Van Otterloo. Effects of feed truck RPM on pellet quality, unloading speed, and feed line location on pellet quality and nutrient segregation. 2015 Kansas State University Swine Day. KS Agric. Exp. Stn. Res. 1:7.
 28. De Jong, J.A., J.C. Woodworth, J.M. DeRouche, M.D. Tokach, R.D. Goodband, S.S. Dritz, **C.K. Jones**, and C.R. Stark. Stability of four commercial phytase sources under increasing conditioning temperature. 2015 Kansas State University Swine Day. KS Agric. Exp. Stn. Res. 1:7.
 29. Lewis, L.L., **C.K. Jones**, A.C. Fahrenholz, M.A.D. Gonclaves, C.R. Stark, and J. M. DeRouche. Feed Processing Parameters and their Effects on Nursery Pig Growth. Kansas State University Swine Research 2013:81-89. KS Agric. Exp. Stn. #13-1092.
 30. **Jones, C.K.**, E.L. Franz, H.L. Frobose, J.M. DeRouche, R.D. Goodband, M.D. Tokach, and J. R. Bergstrom. Effects of Roxazyme G2G and/or Ronozyme VP enzyme inclusion on growth performance of nursery pigs fed normal or drought-stressed corn. Kansas State University Swine Research 2013:90-94. KS Agric. Exp. Stn. #13-1092.
 31. **Jones, C.K.**, N.K. Gabler, and J.F. Patience. 2012. Post-weaning failure to thrive in pigs is associated with increased organ weights and possible anemia, but not changes in intestinal function. Iowa State University Animal Industry Report. AS-Leaflet-R2734.
 32. **Jones, C.K.** and J.F. Patience. 2012. Birth weight and post-weaning failure to thrive affect subsequent growth performance, but not nursery nutrient digestibility or carcass composition of pigs. Iowa State University Animal Industry Report. AS-Leaflet-R2733.
 33. **Jones, C.K.** and J.F. Patience. 2012. Feed efficiency in nursery pigs is maximized when additional Lys is supplied by L-Lys·HCl instead of intact protein, but not affected by differing NEAA nitrogen sources. Iowa State University Animal Industry Reports. AS-Leaflet-R2735.
 34. **Jones, C.K.**, N.K. Gabler, R.G. Main, and J.F. Patience. 2011. Both weaning weight and post-weaning growth performance affect nutrient digestibility and energy utilization in pigs. Iowa State University Animal Industry Report. AS-Leaflet-R2654.
 35. **Jones, C.K.**, N.K. Gabler, R.G. Main, and J.F. Patience. 2011. Irrespective of differences in weaning weight, feed efficiency is not different among pigs with varying average daily gain. Iowa State University Animal Industry Report. AS-Leaflet-R2652.
 36. Greco, A., C.R. Hurburgh, G.P. Munkvold, J.F. Patience, **C.K. Jones**, and C.M. Pilcher. 2011. Defining the feeding value of moldy corn selected for low mycotoxin content. Iowa State University Animal Industry Report. AS-Leaflet-R2656.
 37. Sulabo, R.C., **C.K. Jones**, M.D. Tokach, R.D. Goodband, S.S. Dritz, D.R. Campbell, B.W. Ratliff, J.M. DeRouche, and J.L. Nelssen. 2010. Factors affecting storage stability of various commercial phytase sources. Kansas State University Swine Research 2010:273-289. KS Agric. Exp. Stn. #10-1038.
 38. **Jones, C.K.**, M.D. Tokach, R.D. Goodband, J.L. Nelssen, S.S. Dritz, J.M. DeRouche, and D. McKilligan. 2009. An evaluation of Peptone as a specialty protein source in diets for nursery pigs. Kansas State University Swine Research 2009:80-89. KS Agric. Exp. Stn. #9-1020.
 39. **Jones, C.K.**, M.D. Tokach, B.W. Ratliff, N.L. Horn, S.S. Dritz, R.D. Goodband, J.M. DeRouche, and J.L. Nelssen. 2009. Efficacy of varying phytase levels and development of a P

release curve. Kansas State University Swine Research 2009:106-121. KS Agric. Exp. Stn. #9-1020.

40. **Jones, C.K.**, J.M. DeRouche, J.L. Nelssen, M.D. Tokach, S.S. Dritz, and R.D. Goodband. 2008. Effects of PepSoyGen and Dried Porcine Solubles 50 on nursery pig diets. Kansas State University Swine Research 2008:52-61.
41. **Jones, C.K.**, J.R. Bergstrom, M.D. Tokach, J.M. DeRouche, J.L. Nelssen, S.S. Dritz, and R.D. Goodband. 2008. Effects of commercial enzymes in diets containing dried distillers grains with solubles for nursery pig performance. Kansas State University Swine Research 2008:117-125. KS Agric. Exp. Stn. #8-1001.
42. **Benz, C.K.**, M.D. Tokach, C.N. Groesbeck, S.S. Dritz, J.L. Nelssen, R.D. Goodband, and J.M. DeRouche. 2005. A comparison of Bygholm Feed Sieve to standard particle-size analysis techniques. Kansas State University Swine Research 2005:184-189. KS Agric. Exp. Stn. #5-964.

TEACHING

Courses Currently Taught

TEVAL Raw Score Report Summary Evaluation Scale of 1 (low) to 5 (high)

Courses	TEVAL Evaluation Items	S17	F17	S18	F18
ASI 318 Fundamentals of Nutrition	Number of Students:	133	-	143	-
	(1) Teaching Effectiveness	4.5	-	4.7	-
	(11) Increased Desire to Learn	4.4	-	4.6	-
	(14) Amount Learned in Course	4.5	-	4.6	-
ASI 561 Undergraduate Research in Anim. Sci.	Number of Students:	15	20	20	35 ^a
	(1) Teaching Effectiveness	4.8	4.6	4.7	4.7
	(11) Increased Desire to Learn	4.7	5.0	4.9	4.7
	(14) Amount Learned in Course	4.7	4.6	4.9	4.5
ASI 675 Monogastric Nutrition	Number of Students:	-	43	-	37
	(1) Teaching Effectiveness	-	4.6	-	4.9
	(11) Increased Desire to Learn	-	4.4	-	4.6
	(14) Amount Learned in Course	-	4.4	-	4.6

^aNumber of students is a total sum of 2 sections. Resulting TEVAL scores are means of the 2 sections.

Courses Previously Taught

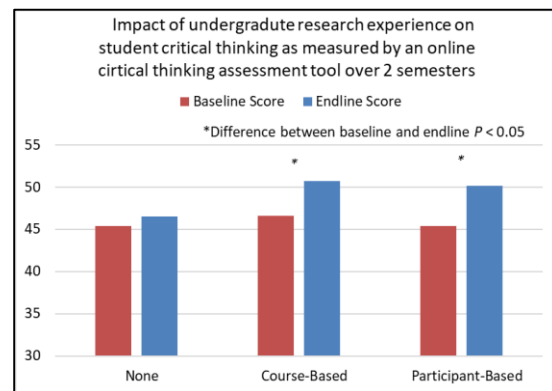
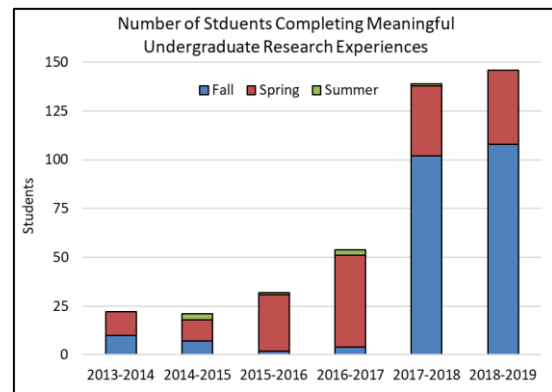
Courses	TEVAL Evaluation Items	2012	2013	2014	2015	2016
GRSC 101 Introduction to Grain Science (Fall)	Number of Students:	132	107	117	109	146
	(1) Teaching Effectiveness	4.2	4.6	4.6	4.7	4.8
	(11) Increased Desire to Learn	4.1	4.3	4.5	4.4	4.7
	(14) Amount Learned in Course	4.2	4.4	4.4	4.5	4.5
GRSC 661/561 Qualities of Feed Ingredients (Spring)	Number of Students:	-	10	18	23	21
	(1) Teaching Effectiveness	-	4.6	4.7	4.6	4.9
	(11) Increased Desire to Learn	-	4.7	4.7	4.4	4.7
	(14) Amount Learned in Course	-	4.8	4.7	4.5	4.9
GRSC 790 Principles and Analytical Methods in Animal Feed Safety (Even Spring)	Number of Students:	-	-	9	-	17
	(1) Teaching Effectiveness	-	-	5.0	-	4.9
	(11) Increased Desire to Learn	-	-	4.8	-	4.8
	(14) Amount Learned in Course	-	-	4.8	-	4.8

Supervision of Graduate Degree Candidates

Student Name	Degree(s)	Starting Date	Graduation or Estimated Date	Present Position
Landon Lewis	MS	Aug-12	2014	Phibro Animal Health
Aaron Bingham	MS	Jan-13	Dismissed	Easy Automation
Grace Bokelman	MS	Aug-13	2015	NUTRIQUEST
Andrea Jeffrey	MS	Jun-14	May 2016	Simmons Pet Food
Loni Schumacher	MS	Oct-14	August 2016	Iowa State University
Mary Muckey	MS	Jun-15	December 2016	Island Farms, LLC
Ashton Yoder	MS	Aug-16	May 2018	Land O'Lakes - Purina
Roger Cochrane	MS, PhD	Jan-14	December 2018	Pipestone Systems
Savannah Stewart	MS	Jan-18	May 2019	-

Coordination of Undergraduate Research

- Standardized expectations for a *meaningful undergraduate research experience* to align with University requirements and meet needs of students and faculty mentors.
- Implemented tracking mechanisms to match students interested in conducting research in specific species/disciplines with faculty mentors needing student support.
- Developed course-based undergraduate research model to provide hands-on experiential learning for up to 20 students per class section. Projects have included antibiotic replacement in poultry diets (Spring 2017), iron injection timing in suckling pigs (Fall 2017), ingredient replacement in meat goats (Spring 2018 and Fall 2018), and consumer acceptability of beef of various quality grades (Fall 2018).
- Designed and implemented scholarship of teaching activities to assess critical thinking skills of entering freshman and growth from various forms of undergraduate research experiences throughout their college experience.



SERVICE

University

- Kansas State Swine Club Advisor
- Collaborative Sorghum Investment Program Advisory Board
- Graduate Program: Food Science Institute, Diagnostic Medicine and Pathobiology

Professional

- FAO/WHO External Expert Panel on Hazards Associated with Animal Feed
- U.S. Food & Drug Administration
 - Food Safety & Preventative Controls Alliance: Alliance of government, academia, and industry participants tasked with providing guidance to the FDA and industry for the implementation of the Food Safety Modernization Act.
 - Editorial Subcommittee: Tasked with creating training material for inspectors and investigators regarding Hazard Analysis and Risk-Based Preventive Controls for Animal Food.
 - Hazard Guidance Subcommittee: Tasked with identifying and assessing physical, chemical, and microbiological hazards in animal food.
 - Expert Panel on Estimating Changes in Hazard Rates in Animal Foods Due to the Animal Foods Good Manufacturing Practice, Hazard Analysis, and Risk-Based Preventive Controls for Food for Animals Rule
- Pet Food Alliance member
- American Feed Industry Association Feed Regulatory Committee
- Session Chair: Midwest American Society of Animal Science Meetings
- Peer-Reviewer: PLOS ONE, J. Anim. Sci., J. Feed Sci., J. Feed Sci. Technol. J. Appl. Poult. Nutr.