

Chad B. Paulk

Assistant Professor
Department of Grain Science and Industry
002C Waters Hall
Kansas State University
Manhattan, KS 66502
Ph: (785) 532-1245 E-mail: cpaulk@ksu.edu

Degrees:

B.S.	2009	Animal and Dairy Science	University of Georgia
M.S.	2011	Animal Science (Swine Nutrition)	Kansas State University
Ph.D.	2014	Animal Science (Swine Nutrition)	Kansas State University

Professional Appointments:

Assistant Professor, Kansas State University	January 2017 to present
Assistant Professor, Texas A&M University	August 2014 to December 2016
Ph.D. Graduate Research Assistant, Kansas State University	June 2011 to June 2014
M.S. Graduate Research Assistant, Kansas State University	August 2009 to June 2011
Undergraduate Research Assistant, University of Georgia	June 2008 to June 2009

Teaching Experience:

Kansas State University

- GRSC 561 Qualities of Feed Ingredients. Spring 2017, Instructor
- GRSC 101 Introduction to Grain Science and Industry. Fall, 2017, Co-Instructor
- GRSC 615 Animal Food Safety. Fall, 2017, Co-Instructor

Texas A&M University

- ANSC 412 Swine Production and Management. Spring 2015 through Spring 2016, Instructor

Kansas State University (Graduate Student Teaching)

- ASI 320 Principles of Feeding Lab. Fall 2010, Graduate Student Instructor

Undergraduate Research:

Kansas State University

- Summer, 2018- 1 student
 - Sydney Buller
 - Determining the AA digestibility of 2 sorghum varieties
- Fall, 2017- 3 students
 - Haley Wecker, Summer and Fall 2017
 - The effects of moisture addition and dwell time of moisture on pellet quality and enzyme stability in corn and wheat based diets
 - Presented as poster presentation at ASAS Midwest meeting in undergraduate research competition (2018).
 - Received 1st place
 - To test the growth performance and nutrient digestibility in broiler chickens fed Jefo's protease with varying levels of digestible lysine

- Presented as oral presentation at IPPE in undergraduate research competition
 - Effects of dietary Vitamin B3 Analog on growth performance of finishing pigs
 - Effects of dietary Vitamin B3 Analog on growth performance of broilers
 - Evaluation of pellet binders on pellet quality
- Michaela Braun and Haley Wecker
 - Effects of grain particle size variation on growth performance and carcass characteristics of finishing pigs
 - Presented as poster presentation at ASAS Midwest meeting in undergraduate research competition (2018).
 - Received 3rd place
- Gage Nichols
 - Effects of medium chain fatty acids on the growth performance of broilers

Texas A&M

- Spring, 2016- 4 students
- Fall, 2015 – 5 Students
- Spring, 2015 – 1 Student

Extended Teaching:

Undergraduate Advisor

- 2017 - 14 students
- 2018 - ? Students

Feed Science Club Advisor, Spring 2017

G.E.A.P. Kansas City, MO, Spring 2017

IPPE Atlanta, GA, Spring 2017

Graduate Advising

Supervision of Graduate Degree Candidates

Student Name	Degree	Graduation or Estimated Date	Responsibility	University
Gage Nichols	MS	May 2020	Advisor	KSU
Michaela Braun	MS	May 2020	Co-Advisor	KSU
Sarah Sprayberry	MS	January 2018	Advisor	TAMU
Kara Dunmire	MS	January 2018	Advisor	TAMU
Amelia Christian	MS	May 2017	Committee	TAMU
Abby Korn	PhD	May 2019	Committee	TAMU
Chelsie Huseman	PhD	December 2018	Committee	TAMU
Allison Millican	PhD	May 2018	Committee	TAMU
Courtney Truelock	PhD	May 2020	Advisor	KSU
Nana Frempong	MS	August 2018	Committee	KSU

Ashton Yoder	MS	August 2018	Committee	KSU
Stephanie Davis	MS	May 2019	Committee	KSU
Roger Cochran	PhD	May 2018	Committee	KSU
Marut Saensukjaroenphon	PhD	December 2019	Committee	KSU
Caitlin Evans	PhD	December 2018	Committee	KSU

Grants at Kansas State University:

Grants Awarded (8 grants - totaling \$198,570):

- 1) ASCUS product stability. C. Paulk and C. Stark. June 2018. **\$10,060.**
- 2) Stability of actives in a spray dried powder under increasing conditioning temperatures. C. Paulk., April 2018 **\$9,000**
- 3) Using NIR to evaluate soybean meal quality. C. Paulk and C. Stark. April 2018. **\$9,212**
- 4) Effects of Jefe Protease and Dietary Lysine on Turkey Performance. C. Paulk, R. Beyer, and C. Stark. March, 2018 **\$28,000**
- 5) Stability of four commercial phytase sources under increasing conditioning temperatures and conditioner retention time during pelleting. **C. Paulk** and C. Stark. **\$18,001**
- 6) Validation of a low-cost tool for Senecavirus A detection, and surveillance of viral prevalence in United States feed mills. C. Jones, M. Niederwerder, V. Trinetta, J. Woodworth, S. Dritz, R. Rowland, **C. Paulk**. Swine Health Information Center Research Proposal **\$21,500.**
- 7) Assessing the role of medium chain fatty acids as an alternative to medically important antibiotics. C. Jones, R. Cochrane, T. G. Nagaraja, J. Pluske, R. Amachawadi, M. Tokach, M. Niederwerder, J. Woodworth, S. Dritz, **C. Paulk**, C. Stark. National Pork Board #17-049 **\$73,597**

Education/Program Grants Awarded:

- 1) US Soybean Export Council Course, Inc. Project: 18KA02U64B. C. Campabadal Teran, C. Paulk, C. Stark, S. Thiele, H. O'Neil. April 2018. **\$29,200.**
- 2) U.S. Soybean Export Council, Inc. Project: U17CXSA016: SEA Strategic Industry Engagement and U.S. Soy Trade Facilitation Initiative. Summer 2017. **\$36,100**
- 3) U.S. Soybean Export Council, Inc. Project: F17GXME002: MENA- Regional Marketing and Promotions. Summer 2017. **\$21,000**
- 4) U.S. Soybean Export Council, Inc. Project: F17GXAM002: Americas Feed& Animal Production Training. Spring 2017. **\$68,000**
- 5) Received a distance education grant to transform Animal Nutrition for Non Majors from a classroom into an 100% online course. **C. Paulk**. 2016. Texas A&M University. Internal Funds. **\$17,000**

Grants at Texas A&M:

Research – 6 grants – totaling \$241,117

Teaching – 1 grant –totaling \$17,000

Research Grants Awarded (6 grants):

- 1) Evaluation of zinc source and level in the presence of *E. coli* in the weaned pig. **C. Paulk**, T. Callaway, J. Gill. 2016. Micro-Nutrients. **\$34,500**
- 2) Effects of adding liquid lactose or molasses to pelleted swine diets on pellet quality and pig performance. **C. Paulk** and T. Wickersham. 2016. AFIA Liquid Feed Committee. **\$46,834**

- 3) Effects of SID Lys level and added tri-basic copper chloride on growth performance of nursery pigs. **C. Paulk**. 2015. Micro-Nutrients. **\$10,000**
- 4) Effects of mineral source and processing method on mineral leaching and vitamin stability in fish feeds. **C. Paulk**. 2015. Micro-Nutrients. **\$2,401**
- 5) Characterization of *Staphylococcus aureus* Bacteriophages in Swine Production Environments. J. Gill and **C. Paulk**. 2016. National Pork Board. **\$47,382**
- 6) Phage Therapy in a Weaned Piglet Model of Enteropathy. J. Gill, **C. Paulk**, T. Callaway, R. Rech. Bill and Melinda Gates Foundation. **\$100,000**

Grants and Gifts at Kansas State University (Ph. D. Program):

Fellowships: 2 fellowships supported by Elanco Animal Health– totaling \$105,000 (2011-2013)

Co-PI on Grants funded (3 grants – totaling \$231,203):

- 1) Effects of Source and Level of Zinc on Growth Performance, Carcass Characteristics, Skeletal Muscle Protein Turnover, and Gastrointestinal Immune Function of Finishing Pigs Supplemented Paylean. J. Gonzalez, **C. Paulk**, M. Tokach, J. DeRouchey, J. Nelssen, R. Goodband, and S. Dritz. 2012. Elanco Animal Health. **\$66,524**
- 2) The development of equations to predict the iodine value of various swine carcass fat depots. J. Gonzalez, D. Burnett, **C. Paulk**, M. Tokach, J. DeRouchey, J. Nelssen, R. Goodband, S. Dritz, and T. Houser. 2013. National Pork Board. **\$68,223**
- 3) Evaluating moderate to severe feed processes in light of increasing use of wheat in swine diets. M.D. Tokach, **C. Paulk**, J. De Jong. J.M. DeRouchey, C. Jones, and R.D. Goodband. 2013. National Pork Board. **\$96,456**

Publications

Refereed Journal Articles	16 published 0 submitted
Refereed Journal Abstracts	33 published
Extension Refereed Publications	2 published
Extension Publications and Non-refereed Publications	25 published

Research and Scholarly Activities:

Patent

- 1) Provisional Patent Application Submitted
 - a. Gonzalez, J. M., S. R. Davis, C. B. Paulk, and H. R. Wecker. 2017. Nicotinamide riboside chloride and its positive effects on poultry and pig growth and meat quality

Refereed Journal Articles

- 1) J. T. Gebhardt, **C. B. Paulk**, M. D. Tokach, J. M. DeRouche, R. D. Goodband, J. C. Woodworth, J. A. DeJong, 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.* 96:2278-2292.
- 2) Martinez, C. K. Jones, C. R. Stark, L. J. McKinney, K. C. Behnke, and **C. B. Paulk**. 2018. Evaluating flushing procedures to prevent nicarbazin carryover during medicated feed manufacturing. *Anim. Feed. Sci. and Tech.* 242:1-7.
- 3) De Jong, J. A., J. M. DeRouche, M. D. Tokach, R. D. Goodband, J. C. Woodworth, S. S. Dritz, C. R. Stark, C. K. Jones, H. E. Williams, J. Erceg, B. Haberl, L. McKinney, G. Smith, D. Van Otterloo, **C. B. Paulk**. 2017. Formation of pellet fines during the feed manufacturing process, transportation and feed line delivery, and their nutrient composition. *ASABE*. 33(6):921-926.
- 4) Phelps, K. J., D. D. Johnson, M. A. Elzo, **C. B. Paulk**, and J. M. Gonzalez. 2017. Effect of Brahman genetics on myofibrillar protein degradation, collagen crosslinking, and tenderness of the longissimus lumborum. *Journal of Animal Science* 95:5397-5406.
- 5) Ebarb, S. M., K. J. Phelps, J. S. Drouillard, K. R. Maddock-Carlin, M. A. Vaughn, D. D. Burnett, C. L. Van Bibber-Krueger, C. B. Paulk, D. M. Grieger, and J. M. Gonzalez. 2017. Effect of anabolic implants and ractopamine-HCl on Longissimus lumborum muscle fiber morphometrics, collagen solubility, and cooked meat tenderness. *J. Anim. Sci.* 95:1219-1231.
- 6) De Jong, J. A., J. M. DeRouche, M. D. Tokach, S. S. Dritz, R. D. Goodband, **C. B. Paulk**, J. C. Woodworth, C. K. Jones, and C. R. Stark. Effects of wheat source and particle size in meal and pelleted diets on finishing pig growth performance, carcass characteristics, and nutrient digestibility. *J. Anim. Sci.* 94:3303-3311.
- 7) Stephenson, E. W., M. A. Vaughn, D. D. Burnett, **C. B. Paulk**, M. D. Tokach, S. S. Dritz, J. M. DeRouche, R. D. Goodband, J. C. Woodworth, and J. M. Gonzalez. 2016. Influence of dietary far source and feeding duration on finishing pig growth performance, carcass composition, and fat quality. *J. Anim. Sci.* 93:1666-1678.
- 8) **Paulk, C. B.**, J. D. Hancock. 2016. Effects of an abrupt change between diet form on growth performance of finishing pigs. *Anim. Feed Sci. and Tech.* 211:132-136.
- 9) Ebarb, S. M., J. S. Drouillard, K. R. Maddock-Carlin, K. J. Phelps, M. A. Vaughn, D. D. Burnett, C. L. Van Bibber-Krueger, **C. B. Paulk**, D. M. Grieger, and J. M. Gonzalez. 2016. Effect of growth-promoting technologies on Longissimus lumborum muscle fiber morphometrics, collagen solubility, and cooked meat tenderness. *J. Anim. Sci.* 94:869-881.
- 10) Burnett, D.D., **C.B. Paulk**, M. D. Tokach, J. L. Nelssen, M. A. Vaughn, K. J. Phelps, S. S. Dritz, J. M. DeRouche, R. D. Goodband, T. E. Houser, K. D. Haydon, and J. M. Gonzalez.

2016. Effect of added zinc in diets with ractopamine HCl on skeletal muscle protein turnover, and gastrointestinal immune function of finishing pigs. *Anim. Biotech.* 27:1, 17-29.
- 11) **Paulk, C. B.**, J. R. Bergstrom, M. D. Tokach, S. S. Dritz, D. D. Burnett, E. W. Stephenson, M. A. Vaughn, J. M. DeRouchey, R. D. Goodband, J. L. Nelssen, and J. M. Gonzalez. 2015. Equations generated to predict iodine value of pork carcass back, belly, and jowl fat. *J. Anim. Sci.* 93:1666-1678.
 - 12) **Paulk, C. B.**, J. D. Hancock, A. C. Fahrenholz, J. M. Wilson, L. J. McKinney, K. C. Behnke, and J. C. Nietfeld. 2015. Effects of feeding cracked corn to nursery and finishing pigs. *J. Anim. Sci.* 93:1-11.
 - 13) **Paulk, C. B.**, J. D. Hancock, A. C. Fahrenholz, J. M. Wilson, L. J. McKinney, and K. C. Behnke. 2015. Effects of sorghum particle size on milling characteristics and growth performance in finishing pigs. *Anim. Feed Sci. and Tech.* 202:75-80.
 - 14) **Paulk, C. B.**, L. J. McKinney, J. D. Hancock, S. M. Williams, S. Issa, and T. L. Gugle. 2014. Effects of diet mix time and ractopamine HCl on finishing pig growth and carcass performance. *J. Anim. Sci.* 93: 1689-1694
 - 15) **Paulk, C. B.**, D. D. Burnett, M. D. Tokach, J. L. Nelssen, S. S. Dritz, J. M. DeRouchey, R. D. Goodband, G. M. Hill, K. D. Haydon, and J. M. Gonzalez. 2014. Effect of added zinc in diets with ractopamine hydrochloride on growth performance, carcass characteristics, and ileal mucosal inflammation mRNA expression of finishing pigs. *J. Anim. Sci.* 93: 185-196.
 - 16) **Paulk, C. B.**, M. D. Tokach, J. L. Nelssen, D. D. Burnett, M. A. Vaughn, K. J. Phelps, S. S. Dritz, J. M. DeRouchey, R. D. Goodband, J. C. Woodworth, T. A. Houser, K. D. Haydon, and J. M. Gonzalez. 2014. Effect of dietary zinc and ractopamine hydrochloride on pork chop muscle fiber type distribution, tenderness, and color characteristics. *J. Anim. Sci.* 92:2325-2335.

Refereed Journal Abstracts

- 1) C. N. Truelock, A. D. Yoder, C. E. Evans, C. R. Stark, S. S. Dritz, J. W. Wilson, N. E. Ward, and C. B. Paulk. 2018. Stability of Four Commercial Microbial Phytase Sources Under Extreme Pelleting Conditions. Poultry Science Association. Accepted.
- 2) 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. Midwest ASAS Meeting. Accepted.
- 3) S. R. Davis, T. A. Houser, T. G. O'Quinn, L. N. Drey, **C.B. Paulk**, D. E. Nuttelman, J. M. Coulter, and J. M. Gonzalez. 2017. The Effects of the EXL LIPEX.FA369[®] Finishing Diet Regimen on Pork Quality and Color Stability. Midwest Animal Science. Midwest Animal Science. (Submitted).
- 4) Evans, C. E., M. Saensukjaroenphon, K. H. Sheldon, C.K. Jones, **C.B. Paulk**, and C. R.

- Stark. 2018. The effect of hammermill screen hole diameter and hammer tip speed on particle size and flow ability of ground corn. Midwest Animal Science. (Submitted).
- 5) Frempong, N., **C. B. Paulk**, C. R. Stark. 2018. Evaluating the effect of replacing fish meal with soybean meal and poultry by-product meal on broiler performance and cost of production. IPPE. (Submitted).
 - 6) Idan, F., **C. B. Paulk**, C. R. Stark. 2018. Evaluating the effect of feeding starter crumbles on the overall performance of broilers raised for forty-two (42) days. IPPE. (Submitted).
 - 7) Wecker, H. K., A.D. Yoder, C. K. Jones, J. C. Woodworth, C. R. Stark, **C. B. Paulk**. 2018. The effects of moisture addition and dwell time of moisture on pellet quality in corn and wheat based diets. Midwest Animal Science. (Submitted).
 - 8) Wecker, H. K., C. Evans, R. S. Beyer, C. R. Stark, J. M. Gonzalez, M. A. Barrios, **C. B. Paulk**. 2018. The effects of dietary lysine level with and without added protease on growth performance of broiler chickens. IPPE. (Submitted).
 - 9) M. Braun, H. K. Wecker., A.D. Yoder, J. C. Woodworth, C. R. Stark, **C. B. Paulk**. 2018. Effects of mill type and particle size variation on growth performance and carcass characteristics of finishing pigs. Midwest Animal Science. (Submitted).
 - 10) K. M. Dunmire, T. A. Wickersham, L. L. Frenzel, S. R. Sprayberry, L. C. Joiner, L. P. Hernandez, A. M. Cassens, B. Dominguez and **C. B. Paulk**. 2018. Effects of adding liquid lactose and molasses to pelleted swine diets on pellet quality and pig performance. Midwest Animal Science. (Submitted).
 - 11) A.A. Millican, J.L. Leatherwood, J.A. Coverdale, C.E. Arnold, A.N. Bradbery, K. Fikes, M.S. Goehring, E.C. Dickson, C.M. Latham, C.J. Hartz, **C.B Paulk**, T.H. Welsh S.H. White, C.K. Larson, E.D. Lamprecht, and T.A. Wickersham. 2018. Evaluation of dietary trace mineral source on markers of cartilage metabolism in weanling horses challenged with lipopolysaccharide. Southern Section Animal Science. (Submitted).
 - 12) Christian A, Knott K, **Paulk C. B.**, Kouba A, Wickersham T. Nutritive composition of bamboo culm, leaves, and shoots selected by two captive giant pandas. Poster session presented at: 97th Annual Meeting of the American Society of Mammalogists; 2017 Jun 20-24; Moscow, ID. (Abstract 151)
 - 13) Christian A, Knott K, **Paulk C**, Kouba A, Wickersham T. Alternative methods to evaluate plant part selection by the giant panda. Poster session presented at: 97th Annual Meeting of the American Society of Mammalogists; 2017 Jun 20-24; Moscow, ID. (Abstract 226)
 - 14) Christian A, Knott K, **Paulk C**, Kouba A, Wickersham T. Seasonal nutrient utilization by two captive giant pandas consuming a bamboo-based diet. Presented at: 97th Annual Meeting of the American Society of Mammalogists; 2017 Jun 20-24; Moscow, ID. (Abstract 283)

- 15) Najar, F., K. J. Phelps, D. D. Johnson, M. A. Elzo, **C. B. Paulk**, and J. M. Gonzalez. 2016. Effect of Brahman genetics on myofibrillar protein degradation, collagen crosslinking, and meat tenderness. Reciprocal Meat Conference (Accepted).
- 16) Stephenson, C. B., M. A. Vaughn, D. D. Burnett, **C. B. Paulk**, M. D. Tokach, S. S. Dritz, J. M. DeRouche, R. D. Goodband, J. M. Gonzalez, J. C. Woodworth. 2015. Influence of dietary fat source and feeding duration on pig growth performance, carcass composition, and fat quality. *J. Anim. Sci.* 93(Supplement 2): 163. (Abstr.)
- 17) De Jong, J. A., J. M. DeRouche, 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.* 93(Supplement 2): 137. (Abstr.)
- 18) Ebarb S. M., K. J. Phelps, M. A. Vaughn, J. A. Noel, **C. B. Paulk**, J. S. Drouillard, and J. M. Gonzalez. 2014. Effects of zilpaterol hydrochloride and implants in beef heifer II: Aging effects on Warner-Bratzler shear force, collagen solubility, and fiber cross-sectional area. *J. Anim. Sci.* 92(E-Supplement 2): 212. (Abstr.)
- 19) **Paulk, C.B.**, J. R. Bergstrom, M.D. Tokach, S.S. Dritz, D.D. Burnett, J.M. DeRouche, R.D. Goodband, J.L. Nelssen, and J.M. Gonzalez. Utilizing meta-analyses to generate prediction equations for pork carcass back, belly, and jowl fat iodine value. *J. Anim. Sci.* 92(E-Supplement 2): 374. (Abstr.)
- 20) **Paulk, C. B.**, M.D. Tokach, S.S. Dritz, J.M. DeRouche, and R.D. Goodband. 2014. Effects of added zinc during the grower and/or finisher phase on growth performance and carcass characteristics of finishing pigs fed diets with or without ractopamine HCl. *J. Anim. Sci.* 92(E-Supplement 2): 947. (Abstr.)
- 21) **Paulk, C.B.**, M.D. Tokach, J.L. Nelssen, D.D. Burnett, M.A. Vaughn, K.J. Phelps, S.S. Dritz, J.M. DeRouche, R.D. Goodband, T.A. Houser, K.D. Haydon, J.M. Gonzalez. 2014. Effects of source and level of added zinc on muscle fiber diameter and skeletal muscle protein turnover of finishing pigs fed ractopamine HCl. *J. Anim. Sci.* 92(Suppl. 2): 132.(Abstr.)
- 22) **Paulk, C.B.**, M.D. Tokach, J.L. Nelssen, D.D. Burnett, K.J. Phelps, M.A. Vaughn, S.S. Dritz, J.M. DeRouche, R.D. Goodband, T.A. Houser, K.D. Haydon, J.M. Gonzalez. 2014. Effect of dietary zinc and Ractopamine-HCl on pork chop tenderness and shelf-life characteristics. *J. Anim. Sci.* 92(Suppl. 2): 132.(Abstr.)
- 23) **Paulk, C.B.**, M.D. Tokach, J.L. Nelssen, J.M. Gonzalez, J.M. DeRouche, R.D. Goodband, S.S. Dritz, G.M. Hill, K.D. Haydon. 2014. Effects of added Zn in diets with ractopamine HCl on growth performance, carcass characteristics, Zn concentrations in plasma, loin, and liver, and ileal mucosal inflammation mRNA expression of finishing pigs. *J. Anim. Sci.* 92(Suppl. 2): 81.(Abstr.)
- 24) **Paulk, C. B.**, G. L. Highland, M. D. Tokach, J. L. Nelssen, S. S. Dritz, R. D. Goodband, and J. M. DeRouche. 2013. Effect of Sampling Method on the Accuracy and Precision of

Estimating the Distribution of Pig Weights in a Population. *J. Anim. Sci.* 91 (suppl.2): O226 (Abstr).

- 25) **Paulk, C. B.**, S. Nitikanchana, S. S. Dritz, M. D. Tokach, R. D. Goodband, J. M. DeRouche, J. L. Nelssen, and K. J. Prusa. 2013. Effects of Increasing Dietary Bakery By-Product on Growing-Finishing Pig Growth Performance and Carcass Quality. *J. Anim. Sci.* 91 (suppl.2): P072 (Abstr).
- 26) **Paulk, C. B.**, M. D. Tokach, J. L. Nelssen, J. M. Gonzalez, J. M. DeRouche, R. D. Goodband, and S. S. Dritz. 2013. Effects of Added Zinc on Growth Performance and Carcass Characteristics of Finishing Pigs Fed Ractopamine HCl. *J. Anim. Sci.* 91 (suppl.2): P060 (Abstr).
- 27) **Paulk, C. B.**, J. D. Hancock, A. C. Fahrenholz, J. M. Wilson, L. J. McKinney, and K. C. Behnke. 2012. Effects of sorghum particle size on growth performance and carcass characteristics in finishing pigs. *J. Anim. Sci.* 90 (Suppl. 3): T158 (Abstr.).
- 28) **Paulk, C. B.**, G. L. Highland, M. D. Tokach, J. L. Nelssen, S. S. Dritz, R. D. Goodband, and J. M. DeRouche. 2012. Effect of sample size and method of sampling pig weights on the accuracy of estimating the mean weight of the population. *J. Anim. Sci.* 90 (E-suppl. 2): 26 (Abstr).
- 29) **Paulk, C. B.**, L. J. McKinney, J. D. Hancock, S. M. Williams, S. Issa, and T. L. Gugle. 2011. Effect of mix time for diets with ractopamine when fed to finishing pigs. *J. Anim. Sci.* 89 (E-suppl. 2): 262 (Abstr).
- 30) **Paulk, C. B.**, A. C. Fahrenholz, J. M. Wilson, L. J. McKinney, J. D. Hancock, K. C. Behnke, J. C. Ebert, and J. J. Ohlde. 2011. Effects of adding cracked corn to a pelleted supplement for nursery and finishing pigs. *J. Anim. Sci.* 89 (E-suppl. 1): 756 (Abstr).
- 31) **Paulk, C. B.**, J. D. Hancock, J. C. Ebert, and J. J. Ohlde. 2011. Effects of an abrupt change from mash to pellets and vice-versa on growth performance in finishing pigs. *J. Anim. Sci.* 89 (E-suppl. 1): 261 (Abstr).
- 32) **Paulk, C. B.**, S. M. Williams, J. D. Hancock, S. Issa, E. F. Mader, S. M. Rogers, A. C. Fahrenholz, L. J. McKinney, and K. C. Behnke. 2010. Effects of mix time on diet uniformity and growth performance of nursery pigs. *J. Anim. Sci.* 88 (E-suppl. 3): 185 (Abstr).
- 33) Williams, S.M., J.D. Hancock, S. Issa, C.B. Paulk, and T.L. Gugle. 2010. Effects of extruding DDGS at high and low temperatures on nutritional value of diets for nursery pigs. *J. Anim. Sci.* 88 (E-Suppl. 2): 675(Abstr).

Refereed Extension Publications

Huseman, C., **C. Paulk**, D. Sigler, J. Zoller. 2017. Adequate Starch Inclusion in the Equine Diet for High Intensity Exercise. Southern Equine Consortium: Vol. 2 No. 3 Issue Date: Dec. 2017

Paulk, C. B. 2014. Marketing Pigs. USPCE Pork Information Gateway

Extension and Other Non-Refereed Publications

1. Evans, C. E.; Saensukjaroenphon, M.; Jones, C. K.; DeRouchey, J. M.; Woodworth, J. C.; Tokach, Michael D.; **Paulk, C. B.**; and Stark, C. R. 2017. "The Effects of Cold Pelleting and Separation of Fine Corn Particles on Growth Performance and Economic Return in Nursery Pigs. Kansas Agricultural Experiment Station Research Reports: Vol. 3(7).
2. Saensukjaroenphon, M.; Evans, C. E.; Sheldon, K. H.; Jones, C. K.; **Paulk, C. B.**; and Stark, C. R., 2017. The Effect of Hammermill Screen Hole Diameter and Hammer Tip Speed on Particle Size and Flowability of Ground Corn. Kansas Agricultural Experiment Station Research Reports: Vol. 3(7).
3. Yoder, A.; Tokach, Michael D.; DeRouchey, J. M.; **Paulk, C. B.**; Stark, C. R.; and Jones, C. K. 2017. Cleaning Reduces Mycotoxin Contamination in Corn. Kansas Agricultural Experiment Station Research Reports: Vol. 3(7).
4. Phelps, K. J.; Johnson, D. D.; Elzo, M. A.; **Paulk, C. B.**; and Gonzalez, J. M. (2017) "Brahman Genetics Negatively Impact Protein Degradation and Tenderness of Longissimus Lumborum Steaks, but do Not Influence Collagen Cross-Linking," Kansas Agricultural Experiment Station Research Reports: Vol. 3: Iss. 1.
5. De Jong, J.A., J.M. DeRouchey, M.D. Tokach, R.D. Goodband, J.C. Woodworth, **C.B. Paulk**, C.K. Jones, C.R. Stark, and S.S. Dritz. 2014. Effects of hard red winter wheat particle size in meal diets on finishing pig growth performance, diet digestibility, and caloric efficiency. Kansas State University Swine Day Report of Progress. 110:269-275.
6. De Jong, J.A., J.M. DeRouchey, M.D. Tokach, R.D. Goodband, **C.B. Paulk**, J.C. Woodworth, C.K. Jones, C.R. Stark, and S.S. Dritz. 2014. Effects of wheat source and particle size in pelleted diets on finishing pig growth performance, caloric efficiency, and carcass characteristics. Kansas State University Swine Day Report of Progress. 110:276-286.
7. Stephenson, E. W., M. A. Vaughn, D. D. Burnett, **C. B. Paulk**, M. D. Tokach, S. S. Dritz, J. M. DeRouchey, R. D. Goodband, J. C. Woodworth, and J. M. Gonzalez. 2014 Influence of Dietary Fat Source and Feeding Duration on Pig Growth Performance, Carcass Composition, and Fat Quality. Kansas State University Swine Day Report of Progress. 110:210-226.
8. **Paulk, C.B.**, J.R. Bergstrom, M.D. Tokach, S.S. Dritz, D.D. Burnett, J.M. DeRouchey, R.D. Goodband, J.L. Nelsens, and J.M. Gonzalez. 2014. Generating Equations Using Meta-Analyses to Predict Iodine Value of Pork Carcass Back, Belly, and Jowl Fat. Kansas State University Swine Day Report of Progress. 110:227-244.
9. **Paulk, C.B.**, M.D. Tokach, S.S. Dritz, J.M. Gonzalez, J.M. DeRouchey, and R.D. Goodband. 2014. Effects of Added Zinc during the Grower and/or Finisher Phase on Growth Performance

and Carcass Characteristics of Finishing Pigs Fed Diets With or Without Ractopamine HCl. Kansas State University Swine Day Report of Progress. 110:164-171.

10. **Paulk, C.B.**, M.D. Tokach, S.S. Dritz, J.L. Nelssen, J.M. DeRouche, and R.D. Goodband. 2014. Determining the Optimal Sampling Method to Estimate the Mean and Standard Deviation of Pig Body Weights Within a Population. Kansas State University Swine Day Report of Progress. 110:302-309.
11. **Paulk, C. B.**, M. D. Tokach, J. L. Nelssen, D. D. Burnett, M. A. Vaughn, K. J. Phelps, S. S. Dritz, J. M. DeRouche, R. D. Goodband, T. E. Houser, K. D. Haydon, and J. M. Gonzalez. 2013. Effect of dietary zinc level and Ractopamine-HCl on pork chop tenderness and shelf-life characteristics. Kansas State University Swine Day Report of Progress 1092:145-159.
12. **Paulk, C. B.**, M. D. Tokach, J. L. Nelssen, J. M. Gonzalez, S. S. Dritz, J. M. DeRouche, R. D. Goodband, G. M. Hill, and K. D. Haydon. 2013. Effect of added zinc in diets with ractopamine HCl on growth performance, carcass characteristics, and zinc concentrations in plasma, loin, and liver of finishing pigs. Kansas State University Swine Day Report of Progress 1092:132-144.
13. **Paulk, C. B.**, S. Nitikanjana, S. S. Dritz, M. D. Tokach, R. D. Goodband, J. M. DeRouche, J. L. Nelssen, and K. J. Prusa. 2012. Effects of increasing dietary bakery by-product on growing-finishing pig growth performance and carcass quality. Kansas State University Swine Day Report of Progress 1074:155-165.
14. **Paulk, C. B.**, M. D. Tokach, J. L. Nelssen, J. M. Gonzalez, J. M. DeRouche, R. D. Goodband, and S. S. Dritz. 2012. Effects of source and level of added zinc on growth performance and carcass characteristics of finishing pigs fed ractopamine HCl. Kansas State University Swine Day Report of Progress 1074:348-355.
15. **Paulk, C. B.**, M. D. Tokach, S. S. Dritz, J. L. Nelssen, J. M. DeRouche, and R. D. Goodband. 2012. Effects of added Zn in diets with ractopamine HCl on growth performance and carcass quality of finishing pigs in a commercial environment. Kansas State University Swine Day Report of Progress 1074:356-364.
16. **Paulk, C. B.**, G. L. Highland, M. D. Tokach, J. L. Nelssen, S. S. Dritz, R. D. Goodband, J. M. DeRouche, and K. D. Haydon. 2012. Effect of sampling method on the accuracy and precision of estimating the mean pig weight of the population. Kansas State University Swine Day Report of Progress 1074:384-391.
17. **Paulk, C. B.**, G. L. Highland, M. D. Tokach, J. L. Nelssen, S. S. Dritz, R. D. Goodband, J. M. DeRouche, and K. D. Haydon. 2012. Effect of sample size and method of sampling pig weights on the accuracy and precision of estimating the distribution of pig weights in a population. Kansas State University Swine Day Report of Progress 1074:392-408.
18. **Paulk, C. B.**, L. J. McKinney, J. D. Hancock, S. M. Williams, S. Issa, and T. L. Gugle. 2011. Effects of Diet Mix Time on Growth Performance of Finishing Pigs Fed Ractopamine HCl. Kansas State University Swine Day Report of Progress 1056:272-277.

19. **Paulk, C. B.**, J. D. Hancock, J. C. Ebert, and J. J. Ohlde. 2011. Effects of Abrupt Changes between Mash and Pellet Diets on Growth Performance in Finishing Pigs. Kansas State University Swine Day Report of Progress 1056:278-281.
20. **Paulk, C. B.**, J. D. Hancock, A. C. Fahrenholz, J. M. Wilson, L. J. McKinney, and K. C. Benhke. 2011. Effects of Sorghum Particle Size on Milling Characteristics, Growth Performance, and Carcass Characteristics in Finishing Pigs. Kansas State University Swine Day Report of Progress 1056:282-287.
21. **Paulk, C. B.**, J. D. Hancock, A. C. Fahrenholz, J. M. Wilson, D. D. Cook, L. J. McKinney, K. C. Benhke, J. C. Ebert, J. J. Ohlde, and J. C. Nietfeld. 2011. Effects of Adding Cracked Corn to a Pelleted Supplement for Nursery and Finishing Pigs. Kansas State University Swine Day Report of Progress 1056:288-300.
22. **Paulk, C. B.**, G. L. Highland, M. D. Tokach, J. L. Nelssen, S. S. Dritz, R. D. Goodband, and J. M. DeRouche. 2011. Effect of Sample Size and Method of Sampling Pig Weights on the Accuracy of Estimating the Mean Weight of the Population. Kansas State University Swine Day Report of Progress 1056:301-318.
23. Williams, S. M., **C. B. Paulk**, J. D. Hancock, S. Issa, and T. L. Gugle. 2010. Effects of Feeding Excess Dietary Crude Protein from Soybean Meal and Dried Distillers Grains with Solubles on Nursery Pig Performance. Kansas State University Swine Day Report of Progress 1038:54-57.
24. Williams, S. M., **C. B. Paulk**, J. D. Hancock, S. Issa, and T. L. Gugle. 2010. Effects of Cracked Corn on Growth Performance and Stomach Lesions in Finishing Pigs. Kansas State University Swine Day Report of Progress 1038:115-118.
25. Williams, S. M., **C. B. Paulk**, J. D. Hancock, S. Issa, and T. L. Gugle. 2010. Effects of Extrusion Processing on the Nutritional Value of Dried Distillers Grains with Solubles in Diets for Nursery Pigs. Kansas State University Swine Day Report of Progress 1038:58-61.

Popular Press Articles

Standardized Grain Particle Size Analysis Recommendations. Charles Stark, Julie Kallvoda, and Chad Paulk. National Hog Farmer. (Submitted January, 2017).

Effects of Dietary Zinc Level and Ractopamine on Pork Chop Tenderness and Shelf-Life Characteristics. The Pig Site. www.thepigsite.com. April 03, 2014.

Effects of Added Zinc in Diets with Ractopamine on Growth Performance, Carcass Characteristics and Zinc Concentrations in Plasma, Loin and Liver of Finishing Pigs. The Pig Site. www.thepigsite.com. March 28, 2014.

This little piggy went to market and this little piggy stayed home. Vita Plus Swine Performance Blog. January 15, 2013.

In swine rations, particle size does matter. Midwest Producer. January 11, 2013.

Proper pen sampling narrows market weight distribution. National Hog Farmer. December 15, 2012.

Effects of sorghum particle size on milling characteristics, growth performance, and carcass characteristics in finishing pigs. www.swineweb.com. October 22, 2012.

Effects of adding cracked corn to a pelleted supplement for nursery and finishing pigs.

www.swineweb.com. July 2, 2012.

Effect of sample size and method of sampling pig weights on the accuracy of estimating the mean weight of the population. www.swineweb.com. May 7, 2012.

Presentations

GRSC Faculty seminar, “Developments in feed additive research”

Kansas State University Swine Day, “Feed Science Research.” Fall 2017.

Liquid Feed Symposium, “Committee Funded Research – Effects of Adding Liquid Lactose or Molasses to Pelleted Swine Diets on Pellet Quality and Pig Performance. Fall 2017

Zinpro Short Course, “Quality Assurance Program” IGP Fall 2017

Zinpro Short Course, “Feed Processing and Monogastric Nutrition” IGP Fall 2017

USSEC Singapore, “Appreciation of Soybean & SBM Quality Parameters.” IGP Summer 2017.

U.S. Agribusiness Partnership Program, “Appreciation of Soybean & SBM Quality Parameters.” Summer 2017.

U.S. Agribusiness Partnership Program, “New Developments in Animal Nutrition & Feed Formulations.” Summer 2017.

USSEC Poultry Feed Milling Training Program, “Quality Differences of SBM by Origin.” IGP Summer 2017.

USSEC Poultry Feed Milling Training Program, “Effect of Feed on Poultry Nutrition (monogastric).” IGP Summer 2017.

USSEC Japan Swine Course, “Effects of feed processing on monogastric nutrition.” IGP Spring, 2017

Texas A&M Swine Vet Club, “Stomach Ulcers in finish pigs” April 2016

Pork 101: “Pig Handling” May 2015, 2016

U. S.-China Scientific Cooperation Exchange Program (Submitted).

- Proposal submitted to the USDA for a short-term scientific exchange with China. The program will last for two weeks. Dr. Chad Paulk, Dr. Christine Budke, Dr. Clay Ashley, Dr. Brandon Dominguez, and Dr. Rosina Krecek propose to visit China Agricultural University, Shandong Binzhou Animal Science and Veterinary Medicine Academy, Sichuan Agricultural University, and Sichuan CDC.

Food Protein: Extraction & Separation Short Course at Texas A&M University. The Use of Animal and Dairy Based Proteins in Swine Diets. 2014

Presented “An Update on PEDv in the US” to the Texas A&M swine vet club.

Service:

Grain Science Committees

Scholarship Committee (Start Spring of 2018)

Head of the Awards Committee (Start Spring of 2018)

Advisor for the feed science club

Grain Science- search committees

- Assistant Professor – Bakery Science (Fall 2017)
- Fellow (Post Doc) – Microbiologist/Feed Safety (Fall 2017)
- Fellow (Post Doc) – Feed Manufacturing (Fall 2017)

Feed Science NIFA capacity project, Fall 2017

Core Competency for Feed Science Program, Fall 2017

Reviewed Midwest Animal Science Abstracts, November 2016

Participated in the Texas A&M Tyson Foods Summit, April 2016

Co-Chair for the Assistant Professor and Extension Swine Specialist search Committee, May 2016

Member of the Texas A&M Department of Animal Science Curriculum Redevelopment Committee,
Spring 2016

Advise undergraduate club "Farmers Fight," April 2016

Member of the NCCC-042 Swine Nutrition Committee

Helped David Royer use brewers grains in his swine diets (September 2015).

Manuscript reviewer: 6 Manuscripts since

Academic Quadrathlon: Completed the swine segment

Served as a faculty reviewer for the 2014 Ronnie Edwards Graduate Teaching Award.

PQA PLUS Trainer/Advisor certified (May 2013).

Generated a prediction equation for NutriQuest, LLC. The equation used nutrient specs of DDGS to estimate angle of repose and flow ability measurements (2012).

Served on the 5 year review committee for the Department Head of KSU Animal Sciences and Industry department (2012).

Provided advice on sampling methods for iodine value estimation at Farmland Foods (2012).