

Chad A. Stahl, Ph.D.

EDUCATION

2000-2004	University of Missouri, Columbia, MO Doctor of Philosophy in Animal Science (Meat Science/Muscle Biology)
1994-1998	Purdue University, West Lafayette, IN Bachelor of Science in Animal Science

EMPLOYMENT

<u>Date</u>	<u>Position</u>	<u>Company/Employer</u>
05/04-Present	Owner/Meat Scientist	Food Animal Consultation & Testing Services
06/16-11/20	Meat Scientist	Choice Genetics
07/05-07/07	Adjunct Faculty	Northwest Iowa Community College

Food Animal Consultation and Testing Services (F.A.C.T.S.) LLC

- Grew and oversaw a third party consulting business that met the welfare, growth, carcass merit, and meat quality needs of more than forty companies and land grant institutions located throughout North America and Asia.
- Collaborated with the National Pork Board and academic colleagues on a multitude of extramurally funded research projects.
- Developed personal and professional relationships with a diverse group of industry representatives encompassing a broad spectrum of the meat and poultry industry.

Choice Genetics U.S.A.

- Designed and executed a plethora of applied research trials in collaboration with our global customers and academic colleagues (China, Japan, Mexico, France, Germany, Brazil, Spain, Colombia, and the United States).
- Served as product validation expert for all commercial research trials involving growth, carcass merit, meat quality, and consumer acceptance.
- Worked with sales, marketing, and technical service personnel to ensure a proper understanding and dissemination of technical reports and scientific data.
- Built and fostered professional relationships with faculty and staff at multiple land grant institutions.
- Advanced company and product recognition through the use of unique marketing techniques, invited speaking opportunities, committee assignments, and peer reviewed publications.
- Led a multifaceted commercial validation program (breed to harvest) for a large Chinese integrator.

MEMBERSHIPS AND COMMITTEE ASSIGNMENTS

M.S. Thesis Committee (Emily Schunke): University of Illinois (2019-2020)
M.S. Thesis Committee (Jack Redifer): University of Illinois (2019-2020)
Pork Safety, Quality, and Human Nutrition Committee: National Pork Board (2018-2020)
Ph.D. Thesis Committee (Jessica Lowell): University of Illinois (2018-2019)
ASAS National Award Committee (2017-2018)
Midwest ASAS-Chairman: Meat Quality Symposium (2016)
Midwest ASAS-Chairman: Meat Science/Muscle Biology Division (2015-2016)
Midwest ASAS/ADSA Growth and Development Committee (2014-2016)
American Society of Animal Science
American Meat Science Association
Pork Quality Solutions Team: National Pork Board-*Former Member*
Producer Education Advisory Team: Iowa Pork Producers Association-*Former Member*

PUBLICATION SUMMARY

Refereed Publications:	16	Book Chapters:	1
Submitted Publications:	0	Reports, Manuals & Tutorial Guides:	9
Publications in Preparation:	0	Popular Press Articles:	10
Abstracts:	39		

PUBLICATIONS

Refereed Publications:

16. Redifer, J.D., J.E. Beever, **C.A. Stahl**, D. D. Boler, A.C. Dilger. 2020. Characterizing the amount and variability of intramuscular fat deposition throughout pork loins using barrows and gilts from two sire lines. J. Anim. Sci. Vol. 98, No. 9, 1–10.
15. Lowell, J.E., E.D. Schunke, E.E. Bryan, **C.A. Stahl**, A.C. Dilger, and D.D. Boler. 2018. Growth performance, carcass quality, fresh belly characteristics, and commercial bacon slicing yields and characteristics of growing-finishing pigs from sire lines intended for different industry applications. Meat Science, 154, 96-108.
14. Lowell, J.E., E.D. Schunke, B.N. Harsh, E.E. Bryan, M.F. Overholt, **C.A. Stahl**, A.C. Dilger, and D.D. Boler. 2018. Correlation comparisons among early postmortem loin quality and aged loin and pork chop quality characteristics between finishing pigs from either Duroc or Pietrain sires. J. Anim. Sci. 2018.96:4644-4657.
13. Lowell, J.E., M.F. Overholt, B.N. Harsh, **C.A. Stahl**, A.C. Dilger, and D.D. Boler. 2017. Relationships between early postmortem and aged pork loin quality characteristics of barrows and gilts. Transl. Anim. Sci. 2017.1:607–619.

12. Berg, E.P., **C.A. Stahl**, M.S. Shannon, D.L. McNamara-Perry, T.B. Schmidt, and B.R. Wiegand. 2010. The influence of dietary protein on market barrows and gilts supplemented creatine monohydrate in conjunction with a high glycemic carbohydrate. *Meat Science*, 88/3, 429-433.
11. Moeller, S.J., R.K. Miller, T.L. Aldredge, K.K. Edwards, K.E. Logan, H.N. Zerby, M. Boggess, J.M. Box-Steffensmeier, and **C.A. Stahl**. 2010. Trained sensory perception of pork eating quality as affected by fresh and cooked pork quality attributes and endpoint cooked temperature. *Meat Science*, 85/1, 96-103.
10. Moeller, S.J., R.K. Miller, K.K. Edwards, H.N. Zerby, K.E. Logan, T.L. Aldredge, **C.A. Stahl**, M. Boggess, J.M. Box-Steffensmeier. 2010. Consumer perceptions of pork eating quality as affected by pork quality attributes and end-point cooked temperature. *Meat Science*, 84/1, 14-22.
9. **Stahl, C.A.**, M.S. Carlson-Shannon, B.R. Wiegand, D.L. Meyer, T.B. Schmidt, and E.P. Berg. 2007. The influence of creatine and a high glycemic carbohydrate on the growth performance and meat quality of market hogs fed ractopamine hydrochloride. *Meat Science*, 75/1, 143-149.
8. **Stahl, C.A.**, H. Heymann, and E.P. Berg. 2006. Pork quality attributes associated with carcass bilateral variation. *J. Anim. Sci.* 84:456-462.
7. Schmidt, T.B., K.C., Olson, D. L. Meyer, M. M. Brandt, G. K. Rentfrow, **C. A. Stahl**, and E.P. Berg. 2005. Effect of lipoic acid supplementation on finishing steer growth performance, carcass merit, beef tenderness, and beef retail display properties. *Prof. Anim. Sci.* 21:480-485.
6. Schmidt, T.B., K.C. Olson, M.L. Linville, J.H. Clark, D.L. McNamara, M.M. Brandt, **C.A. Stahl**, G.K. Rentfrow, and E.P. Berg. 2005. Effect of dry matter intake restriction on growth performance and carcass merit of finishing steers. *Prof. Anim. Sci.*: 21:332-338.
5. Meyer, D.L., M.S. Kerley, E.L. Walker, D.H. Keisler, V.L. Pierce, T.B. Schmidt, **C.A. Stahl**, M.L. Linville, and E.P. Berg. 2005. Ultrasonic growth curve analysis, final carcass measurements, and shear force data in early weaned versus traditional weaned beef steers. *J. Anim. Sci.* 83:2752-2761.
4. Rentfrow, G.K., M.L. Linville, **C.A. Stahl**, K.C. Olson, and E.P. Berg. 2004. The effects of α -lipoic acid on beef longissimus bloom time. *J. Anim. Sci.* 82: 3034-3037.
3. **Stahl, C.A.**, M.W. Greenwood, and E.P. Berg. 2003. Growth parameters and carcass quality of broilers (0-6 weeks of age) fed a corn-soybean diet supplemented with creatine monohydrate. *International Journal of Poultry Sci.* 2 (6): 404-408.

2. **Stahl, C.A.** and E.P. Berg. 2002. Growth parameters and meat quality of finishing hogs supplemented creatine monohydrate and a high glycemic carbohydrate for the last 30 d of production. *Meat Science*, 64, 169-174.
1. **Stahl, C.A.**, G.L. Allee, and E.P. Berg. 2001. Creatine monohydrate supplementation in swine finishing diets and fresh pork quality. II. Commercial Applications. *J. Anim. Sci.* 79:3081-3086.

Abstracts:

39. Schunke, E.D., J.E. Lowell, **C.A. Stahl**, A.C. Dilger and B.N. Harsh. 2019. Effect of varying growth rates on early and aged pork loin and chop quality. (Submitted to Midwest Section of ASAS).
38. Redifer, J.D., J.E. Beever, **C.A. Stahl**, D.D. Boler, and A.C. Dilger. 2019. Characterizing the amount and variability of intramuscular fat deposition throughout the loin using barrows and gilts from two genotypes. (Submitted to Midwest Section of ASAS).
37. Lammers, P.J, **C.A. Stahl** and M.S. Honeyman. 2019. Carcass characteristics and growth performance of market pigs fed reduced lysine diets in bedded hoop barns. (Submitted to Midwest Section of ASAS).
36. Lowell, J.E., E.D. Schunke, B.N. Harsh, E.E. Bryan, **C.A. Stahl**, A.C. Dilger and D.D. Boler. 2018. Correlation comparisons among early postmortem loin quality and aged loin and pork chop quality characteristics between finishing pigs from either Duroc or Pietrain ancestry. (Submitted to 71st Recip. Meat Confr.).
35. Lowell, J.E., M.F. Overholt, B.N. Harsh, **C.A. Stahl**, A.C. Dilger, and D.D. Boler. 2017. Relationships between early postmortem and aged pork loin quality characteristics of barrows and gilts. (Submitted to 70th Recip. Meat Confr.).
34. Van De Weyer, L., R. Petracek, **C. Stahl** and J. Daigneault. 2016. Evaluation of female pigs dosed with Improvest[®] and raised with Improvest[®] males in a Canadian swine production setting. IPVS2016-646.
33. Greger, D.L., Morel C., Bee G., Ampuero S., Baumrucker C.R., Barbato, G., **Stahl C.A.** and Blum, J.W. 2008. Transcriptional profiling of hepatic constitutive androstane receptor (CAR) and CAR target genes: New opportunities for reducing boar taint in uncastrated pigs. EAAP workgroup meeting, Girona 2008. No. 179.
32. Newman, D.J., T.B. Schmidt, E.L. Walker, **C.A. Stahl**, G.K. Rentfrow, D.L. Meyer, V.L. Pierce, M.R. Ellerseick, and E.P. Berg. 2006. Instrument prediction of pork carcass composition. (Presented at the Midwest Section of ASAS, Abstract # 239.

31. Newman, D.J., E.L. Walker, T.B. Schmidt, D.L. Meyer, **C.A. Stahl**, G.K. Rentfrow, V.L. Pierce, M.R. Ellerseick, and E.P. Berg. 2005. Evaluation of current United States pork industry carcass grading equipment. Submitted to Proc. *51st International Congress of Meat Science & Technology* (Baltimore, Maryland).
30. Schmidt, T.B., K.C. Olson, M.L. Linville, J.H. Clark, **C.A. Stahl**, D.L. McNamara, G.K. Rentfrow, and E.P. Berg. 2005. Effect of intake restriction on energy balance and retention of N and P by beef steers. (Presented at the Midwest Section of ASAS, Abstract # 254).
29. **Stahl, C.A.**, G. Rentfrow, and E.P. Berg. 2004. The use of creatine as a means of improving the belly/bacon quality of market hogs fed 4.5 g/ton Paylean[®]. (Submitted to the National Section of ASAS).
28. Schmidt, T.B., K.C. Olson, **C.A. Stahl**, M.M. Brandt, D.L. McNamara, M.L. Linville, D. Kemp, and E.P. Berg. 2003. Effect of dietary lipoic acid on growth performance and carcass characteristics of finishing steers. (Presented at the Midwest Section of ASAS, Abstract # 110).
27. Schmidt, T.B., K.C. Olson, M.L. Linville, M.M. Brandt, **C.A. Stahl**, D.L. McNamara, G. Rentfrow, and E.P. Berg. 2003. Effect of limit-feeding on performance and carcass merit of finishing steers. (Presented at the Midwest Section of ASAS, Abstract # 261).
26. Schmidt, T.B., M.M. Brandt, K.C. Olson, D.L. McNamara, **C.A. Stahl**, D.J. Newman, G. K. Rentfrow, D. Kemp, and E.P. Berg. 2003. Effect of supplemental dietary lipoic acid on the color and shelf-life of beef longissimus muscle. (Presented at the Midwest Section of ASAS, Abstract # 111).
25. McNamara, D.L., E.L. Walker, M.S. Kerley, D.H. Keisler, V.L. Pierce, T.B. Schmidt, **C. A. Stahl**, M.L. Linville, E.P. Berg. 2003. Growth curve analysis of early versus traditional weaned beef steers. (Submitted to Midwest Section of ASAS, Abstract # 100).
24. **Stahl, C.A.**, M.S. Carlson, D.L. McNamara, T.B. Schmidt, D.J. Newman, C. M. Schultz Kaster, and E.P. Berg. 2003. The influence of creatine and a high glycemic carbohydrate on the growth performance and meat quality of market hogs fed ractopamine hydrochloride. (Submitted to 56th Recip. Meat Confr.).
23. **Stahl, C.A.**, M.S. Carlson, D.L. McNamara, T.B. Schmidt, D.J. Newman, C.M. Schultz Kaster, and E.P. Berg. 2003. Growth parameters and carcass merit of market hogs supplemented creatine monohydrate in conjunction with ractopamine hydrochloride (Paylean[®]) and a high glycemic carbohydrate. (Presented at the National Section of ASAS, Abstract # 544).
22. **Stahl, C.A.**, B.R. Wiegand, M.S. Carlson, D.L. McNamara, T.B. Schmidt, and E.P. Berg. 2003. The influence of dietary protein on market barrows and gilts supplemented creatine monohydrate in conjunction with a high glycemic carbohydrate. (Presented at the National Section of ASAS, Abstract # W75).

21. Linville, M.L., K.C. Olson, **C.A. Stahl**, D.L. McNamara, T.B. Schmidt, G.R. Rentfrow, E.L. McFadin, D.K. Davis and E.P. Berg. 2003. Effect of limit-feeding on performance, carcass merit, and digestion by finishing steers. (Presented at the Midwest Section of ASAS, Abstract # 339).
20. McNamara, D.L., E.L. McFadin, M.S. Kerley, D.H. Keisler, V.L. Pierce, **C.A. Stahl**, T.B. Schmidt, M.L. Linville and E.P. Berg. 2003. Influence of weaning age and implant strategy on serum concentrations of leptin in cattle. (Presented at the Midwest Section of ASAS, Abstract # 112).
19. **Stahl, C.A.**, M.L. Linville, G.K. Rentfrow, G.L. Allee, and E.P. Berg. 2002. Growth and meat quality of finishing hogs supplemented creatine monohydrate and a high glycemic carbohydrate 30 d pre-harvest. Proc. 55th Recip. Meat Confr. 55:36.
18. **Stahl, C.A.**, M.L. Linville, G.K. Rentfrow, G.L. Allee, and E.P. Berg. 2002. Growth and meat quality of finishing hogs supplemented creatine monohydrate and a high glycemic carbohydrate 30 d pre-harvest. J. Anim. Sci. 80 (Suppl. 1):127.
17. Schmidt, T.B., **C.A. Stahl**, D.L. McNamara, G.K. Rentfrow, and E.P. Berg. 2002. The effect of alpha-lipoic acid on shelf life and Warner-Bratzler shear force values of fresh pork. J. Anim. Sci. 80 (Suppl. 1):127.
16. Schmidt, T.B., **C.A. Stahl**, D.L. McNamara, G.K. Rentfrow, and E.P. Berg. 2002. The effect of alpha-lipoic acid on shelf life and Warner-Bratzler shear force values of fresh pork. Proc. 55th Recip. Meat Confr. 55:48.
15. Rentfrow, G.K., M.L. Linville, **C.A. Stahl**, K.C. Olson, and E.P. Berg. 2002. The affects of α -lipoic acid on beef longissimus bloom time. J. Anim. Sci. 80 (Suppl. 1):127.
14. Spencer, J.D., **C.A. Stahl**, A.M. Gaines, D.C. Kendall, G. Yi, J.W. Frank, E.P. Berg, D.J. Jones and G.L. Allee. 2001. The efficacy of Paylean (ractopamine hydrochloride) addition to late-finishing swine diets in a controlled cycling hot environment. J. Anim. Sci. 80 (Suppl. 2):189.
13. Rentfrow, G.K., K.R. Maddock, **C.A. Stahl**, M.L. Linville, T.E. Sauber, G.L. Allee, and E.P. Berg. 2001. The influence of diets containing conventional corn, conventional corn and choice white grease, high oil corn, or high oil, high oleic corn on belly/bacon quality. J. Anim. Sci. 79 (Suppl. 1):442.
12. Norman, J.L., C.L. Lorenzen, **C.A. Stahl**, G.K. Rentfrow, E.P. Berg, and H. Heymann. 2001. In-home consumer acceptance of boneless pork loins varying in color. J. Anim. Sci. 79 (Suppl. 1):18.
11. Lorenzen, C.L., J.L. Norman, G.K. Rentfrow, **C.A. Stahl**, E.P. Berg, and M.R. Ellersieck. 2001. Variation in color and pH measurements throughout boneless pork loins. J. Anim. Sci. 79 (Suppl. 1):18.

10. Maddock, K.R., E.P. Berg, **C.A. Stahl**, M.L. Linville, and J.A. Carroll. 2001. The effects of alpha lipoic acid (LA) on performance and health of weaned neonatal pigs. *J. Anim. Sci.* 79 (Suppl. 1):398.
9. **Stahl, C.A.**, M.L. Linville, K.R. Maddock, T.E. Sauber, G.L. Allee, and E.P. Berg. 2001. Diets containing conventional corn, conventional corn and choice white grease, high oil corn, or high oil, high oleic corn will influence the fatty acid profile of fresh pork adipose tissue. *J. Anim. Sci.* 79 (Suppl. 1):441.
8. **Stahl, C.A.**, E.P. Berg, W.R. Lamberson, and T.J. Safranski. 2001. Development of a Quality Lean Index for ranking pork carcasses in a contest setting. *J. Anim. Sci.* 79 (Suppl. 2):62.
7. **Stahl, C.A.**, M.L. Linville, M. Swaney-Stueve, K.R. Maddock, G.L. Allee, and E.P. Berg. 2000. Pork carcass quality attributes associated with side-to-side variation. *Proc. 53rd Recip. Meat Confr.* 53:137.
6. Berg, E.P., M.L. Linville, **C.A. Stahl**, K.R. Maddock, G.L. Allee. 2000. Does creatine monohydrate supplemented to swine finishing rations effect pork quality? *Proc. 53rd Recip. Meats Confr.* 53:124.
5. Berg, E.P., M.L. Linville, **C.A. Stahl**, K.R. Maddock, G.L. Allee. 2000. Does creatine monohydrate supplemented to swine finishing rations effect pork quality? *J. Anim. Sci.* 78 (Suppl. 1):158.
4. **Stahl, C.A.**, M.L. Linville, M. Swaney-Stueve, K.R. Maddock, G.L. Allee, and E.P. Berg. 2000. Pork carcass quality attributes associated with side-to-side variation. *J. Anim. Sci.* 78 (Suppl. 1):158.
3. Maddock, K.R., E.P. Berg, M.E. Zannelli, L.A. Beausong, **C.A. Stahl**, M.L. Linville, and J.A. Carroll. 2000. Supplemental alpha-lipoic acid and neonatal health and performance in weaned pigs. *J. Anim. Sci.* 78 (Suppl. 1):183.
2. Felton, E.E.D., C.L. Lorenzen, **C.A. Stahl**, M.S. Kerley, S.D. Soderlund, and F.N. Owens. 2000. Dietary fat source alters beef carcass tocopherol and fatty acid profiles. *J. Anim. Sci.* 79 (Suppl. 2):127.
1. Eggert, J.M., **C.A. Stahl**, M.A. Latour, B.T. Richert, D.E. Gerrard, J.C. Forrest, B.C. Bowker, E.J. Wynveen, J.E. Hammelman, and A.P. Schinckel. 1999. Effects of corn, conjugated linoleic acid (CLA) and duration of storage on the shelf-life of fresh pork. *J. Anim. Sci.* 77 (Suppl. 1):169.

MANUALS, BOOK CHAPTERS AND SPECIAL PROJECTS

9. **Stahl, C.A.** and J.T. Fangman. 2020. NPB# 20-115: Determining the efficacy and safety of differing caliber/ammunition combinations for the humane euthanization and subsequent mass depopulation of market weight pigs. National Pork Board.
8. Fangman, T.J., **C.A. Stahl** and J.T. Fangman. 2020. Understanding muzzle energy (Energy) when selecting an appropriate firearm for humane euthanasia. National Pork Board.
7. **Stahl, C.A.** and T.J. Fangman. 2020 (Humane Euthanization: Important factors to consider when using a captive bolt stunning device. 2nd Edition. National Pork Board.
6. **Stahl, C.A.** 2006. New USDA Guidelines Lower Pork Cooking Temperature (Senior author of the primary literature review presented to the USDA for approval). National Pork Board.
5. **Stahl, C.A.** and T.J. Fangman. 2006. Humane Euthanization: Important factors to consider when using a captive bolt stunning device. National Pork Board.
4. **Stahl, C.A.** 2004. Trucker Quality Assurance™ Facilitator Manual and Interactive CD-ROM (Senior Author and Editor) National Pork Board.
3. **Stahl, C.A.** 2004. Trucker Quality Assurance™ Participant Manual (Senior Author and Editor) National Pork Board.
2. Berg, E.P. and **C.A. Stahl**. 2004. Pork: Inspection/Processing/Marketing. In: Encyclopedia of Animal Science. Marcel Dekker, Inc. New York, NY.
1. **Stahl, C.A.** and G. Rentfrow. 2002. National Pork Board's Retail Marketers Guide to Pork Quality "Meat Science for the Meat Marketer". (114 slide interactive PowerPoint Presentation).

POPULAR PRESS ARTICLES & INVITED COMMENTARIES

- **Swineweb.com**. August, 2014. *What are the TRUE Cost(s) of Doing Business?*
- **Swineweb.com**. May, 2014. *Dinner Plans Interrupted: A Case for Outdoor Mortality Enclosures.*
- **Missouri Ruralist**, Polo, MO. October, 2011. *Enter the calm and quiet zone when working your livestock.*
- **Seedstock Edge**, Lafayette, IN. October, 2007. *Driving for Quality-National Swine Registry's muscle-quality EPD program promotes purebred breeders and pork quality.*
- **Seedstock Edge**, Lafayette, IN. September, 2007. *A step ahead – For Emily Arkfeld, it's more than just the NJSS.*

- **PORK Magazine**, Lenexa, KS. *I Don't Have Time For This-The Relationship Between Poor Handling and Pork Quality*. November, 2006.
- **Iowa Farmer Today**, Shannon, IL. March 23, 2006. *Poor Handling of Pigs Has Implications*.
- **Farmanddairy.com**. September 12, 2002. *Pigs bulk up with sports supplement*.
- **Columbia Missourian**, Columbia, MO. Sept. 25, 2002. *Choice Chops: The supplement creatine is being used to increase muscle growth in pigs, which in turn can produce juicier pork cuts*.
- **Columbia Daily Tribune**, Columbia, MO. Aug. 27, 2002. *Muscle supplement yields more pork chops: MU research on creatine to be published*.

TEACHING EXPERIENCE

NORTHWEST IOWA COMMUNITY COLLEGE

Served as instructor for the following class:

- **Essentials of Nutrition and Diet Therapy**. Summer 2005, 2006, 2007.
Responsible for pre- and post-class preparation, lecture, and laboratory instruction.

UNIVERSITY OF MISSOURI

Served as co-instructor for the following class:

- **Introduction to Animal Agriculture (ANSC 65)**. Fall 2003; Winter 2004.
Responsible for pre- and post-class preparation, lecture, and laboratory instruction.

Served as teaching assistant for the following classes:

- **Biochemistry and Physiology of Muscle as a Food (ANSC 301)**. Fall 1999, 2000.
Responsible for pre- and post-class preparation.
- **Principles of Meat Science (ANSC 204)**. Fall 2000.
Responsible for laboratory instruction (three 2-hour lab sections/wk).
- **Introduction to Animal Agriculture (ANSC 65)**. Fall 2000, 2002; Spring 2001, 2003.
Responsible for laboratory instruction (two 2-hour lab sections/wk).

Served as a guest lecturer for the following classes:

- **Animal Science (ANSC 11)**
Lecture: *Current Meat Quality Issues*
Lecture: *Opportunities in Meat Science*

- **Introduction to Animal Science (ANSC 65)**
 Lecture: *Live Appraisal of the Market Hog*
 Lecture: *Swine Carcass Evaluation and Necropsy*
- **Principles of Meat Science (ANSC 204)**
 Lecture: *Carcass Anatomy*
- **Biochemistry and Physiology of Muscle as a Food (ANSC 301)**
 Lecture: *The Use of Ractopamine Hydrochloride in Swine Finishing Diets*
 Lecture: *Muscle Hypertrophy*
 Lecture: *Why Study Muscle?*
- **Live Animal and Meat Evaluation (ANSC 104)**
 Lecture: *Pork Carcass Grading, Fabrication, and Pricing*
 Lecture: *Live Appraisal of the Market Hog Using Real-Time Ultrasound*
- **Swine Production Management (ANSC 355)**
 Lecture: *Pork Carcass Fabrication*
 Lecture: *Instrumentation to Measure Pork Quality*
 Lecture: *Ensuring the Consumer Appeal of “Your” Pork Products*
- **Junior Seminar (ANSC 210)**
 Lecture: *Graduate Opportunities in Meat Science*

RESEARCH GRANTS/FUNDING OPPORTUNITIES

2. National Pork Board (\$30,863.81): Determining the efficacy of differing caliber/ammunition combinations for the humane euthanization and subsequent mass depopulation of market weight pigs. (Stahl and Fangman; 2020)
1. National Pork Board (\$99,869): Characterizing the amount, variability and cellular mechanisms of intramuscular fat deposition throughout the loin using barrows and gilts from two genotypes. (Boler, Dilger, Beever, and Stahl; 2018)