

CURRICULUM VITAE

University of Idaho

NAME: Phillip Bass

DATE: 11/29/2022

RANK OR TITLE: Associate Professor, Meat Scientist

DEPARTMENT: Animal, Veterinary and Food Sciences

OFFICE LOCATION AND CAMPUS ZIP: Agriculture Science Building, Office 221, MS 2330, 83844-2330

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DATE OF FIRST EMPLOYMENT AT UI: November 1, 2017

DATE OF TENURE: Untenured

DATE OF PRESENT RANK OR TITLE: November 1, 2017

EDUCATION BEYOND HIGH SCHOOL:

Degrees:

Ph.D., Animal Science, May 2009, Colorado State University, Fort Collins, CO – Meat Science Specialization

M.S., Animal Science, June 2006, California Polytechnic State University, San Luis Obispo, CA – Meat Science Specialization

B.S., Animal Science, June 2004, California Polytechnic State University, San Luis Obispo, CA – Meat Science Specialization, Poultry Science Minor

EXPERIENCE:

Teaching, Extension and Research Appointments:

Assistant Professor – Meat Science, University of Idaho, Moscow, ID, 2017 – Present

Adjunct Faculty – School of Food Science, Washington State University, Pullman, WA. 2020 – Present

Affiliate Faculty – Animal Science, Colorado State University, Fort Collins, CO, 2012 – 2015

Graduate Research Assistant, Colorado State University, Fort Collins, CO, July 2006 – July 2009

Graduate Research and Teaching Assistant, California Polytechnic State University, San Luis Obispo, CA, June 2004 – June 2006

Non-Academic Employment:

Certified Angus Beef LLC, Senior Meat Scientist, July 2009 – October 2017

Provided technical meat science expertise, plan and execute specialized staff and account training, conduct meat fabrication demonstrations, plan and execute internal research projects, initiated and maintained quality assurance records, and worked with team to develop and convey new products to accounts

Consulting: (List company/institute name, title, brief description, date)

Meat Sci Guy, Principal, May 2009 – Current

Provided beef market management program for private beef industry companies both nationally and internationally

TEACHING ACCOMPLISHMENTS: (Academic and Extension teaching)

Areas of Specialization: Meat Science and Animal Production

University of Idaho:

The Science of Animals that Serve Humanity, AVS 109, 2018 – Present (4 cr.)
Animal Products for Human Consumption, AVS 363/FS363, 2018 – Present (4 cr.)
Advanced Animal Products & Food Safety, AVS 502, 2019 – Present (4 cr.)
Advanced Meat Animal Fabrication, AVS 504, 2019 – Present (3 cr.)
Meat Science Internship, AVS 398, 2019 – Present (1 cr.)
Food Product Development, FS 489, 2022 – Present (3 cr.)

Colorado State University:

Anatomy and Physiology (Teaching Assistant/Guest Lecturer), ANEQ 230, 2006-2008 (3 cr.)
Interpreting Animal Science Research (Teaching Assistant/Guest Lecturer), ANEQ 565, 2009 (3 cr.)
Carcass Fabrication and Anatomical Nomenclature, ANEQ 495, 2009 (2 cr.)

California Polytechnic State University:

Introductory Meat Science (Laboratory Section), ASCI 211, 2004 – 2006 (1 cr.)
Processed Meats (Laboratory Section), ASCI 384, 2005 – 2006 (1 cr.)
Egg and Poultry Processing (Laboratory Section), ASCI 320, 2005 – 2006 (1 cr.)

Students Advised:

Graduate Students:

Chair of Graduate Committee:

Yufei Guo (Ph.D., 2022 – Current)
Brooklyn Epperson (M.S., 2021 – Current)
Sierra Jepsen (M.S., 2021 – Current)
Jessica Lancaster (Ph.D., 2018 – 2021)
Jaxon Smart (M.S., 2019 – 2021)

Served on Graduate Committee:

Kayleen Oliver (Ph.D., 2021 – Current)
Mikayla Heimbuch (M.S., 2021 – Current)
Katie Walker (M.S., 2020- Current)
Jessie Van Buren (M.S., 2020-Current)
Antonetta Colacchio (M.S., 2018 – 2019)
Avani Gouru (M.S., 2018 – 2019)
Brianna Buseman (M.S., 2018 – 2020)
Tanya Weber (M.S., 2018 – 2020)

Undergraduate Research Students Advised:

Anna Chapleski (2021 – 2021)
Isaac Riley (2018-2019)
Abbie Uhlenkott (2018-2019)

Student Internship Recipients:

Abbie Rowland (JBS Pork - Louisville, 2020)
Brianna Whisman (Newport Meats of Nevada, 2019)
Isaac Riley (Newport Meats Pacific Northwest, 2019)
Abbie Uhlenkott (Newport Meats of Southern California, 2019)

Courses Developed:

Advanced Meat Animal Fabrication, AVS 504 (3), 2019 – University of Idaho
 Meat Science Internship, AVS 398 (1), 2019 – University of Idaho
 The Science of Animals that Serve Humanity (updated), AVS 109 (4 cr.), 2018 – University of Idaho
 Animal Products for Human Consumption (updated), AVS 363 (4 cr.), 2018 – University of Idaho
 Advanced Animal Products & Food Safety, AVS 504 (4 cr.), 2019 – University of Idaho
 Master of Brand Advantages, 2010 – Certified Angus Beef LLC
 Carcass Fabrication and Anatomical Nomenclature, ANEQ 495 (2 cr.), 2009 – Colorado State University

Non-credit Classes, Workshops, Seminars, Invited Lectures, etc.:

Bass, P.D. Impact of meat packing in the US – Leadership Idaho Agriculture, Moscow, ID, November 2022.

Bass, P.D. Advanced Ranch Management – growth and meat quality, Carmen, ID, September 2022.

Bass, P.D. FARE Idaho Beef Workshop, Moscow, ID, August 2022.

Bass, P.D. Retail beef workshop – Winco, Moscow, ID, June 2022.

Bass, P.D. Chef beef workshop – Idaho Beef Council, Moscow, ID, June 2022.

Bass, P.D. Breaking down the beef forequarter – From the Ashes Barbeque Event, Coeur d’Alene, ID, June 2022.

Bass, P.D. Understanding the beef carcass – Kansas Cattlemen’s Association Stockmanship and Stewardship, Leavenworth, KS, June 2022.

Bass, P.D., A. McKeith, W. Schilling, and A. DeMello. Activities with students to attract students to meat science without meat judging – American Meat Science Association 75th Reciprocal Meat Conference, Des Moines, IA, June 2022.

Bass, P.D. Advanced Ranch Management Beef Workshop, Moscow, ID, May, 2022

Bass, P.D. Value-added beef cuts – Northwest Meat Processors Association. Hermiston, OR, March, 2022

Bass, P.D., M.J. Colle, and J. Nasados. Beef value workshop – Agri Beef. Moscow, ID, March, 2022

Bass, P.D. Understanding the beef carcass – Washington State Beef Council. Moses Lake, WA, January 2022.

Bass, P.D. From trucks to tips: examples of how the meat industry impacts the US workforce – Leadership Idaho Agriculture. Moscow, ID, November, 2021.

Bass, P.D. From trucks to tips: examples of how the meat industry impacts the US workforce – Cal Poly College of Agriculture, Food and Environmental Sciences Webinar. Moscow, ID, October, 2021.

Bass, P.D. Dry-aged beef factors: industry observations. University of Nebraska – Lincoln Dry-Aged Beef Workshop. Lincoln, NE, July, 2021.

Bass, P.D. Yield and true product costing. University of Nebraska – Lincoln Dry-Aged Beef Workshop. Lincoln, NE, July, 2021.

Colle, M.J., and P.D. Bass. Checkoff research update – Idaho Cattle Association Summer Roundup. Salmon, ID. June, 2021

Bass, P.D., Meat science team and Vandal Brand Meats facility update – University of Idaho College of Agricultural and Life Sciences Extension in-service. Moscow, ID. April, 2021.

- Bass, P.D. Saddles and sirloins – drivers of success!, Canyon County Cattlemen’s Winter Beef School, Caldwell, ID – November, 2020.
- Bass, P.D. Staying positive in the ag business!, Leadership Idaho Agriculture, Moscow, ID – November, 2020.
- Bass, P.D. and M. Paul. How to pick the best cut of beef, Idaho Today, NBC Affiliates KTVB/KTFT, August, 2020.
- Bass, P.D. Center of the plate beef update, Sysco Seattle Chef Webinar, Moscow, ID – July, 2020.
- Bass, P.D., Center of the plate virtual showcase, Sysco Spokane Webinar, Moscow, ID – July, 2020.
- Bass, P.D., Summer beef update, Sysco Seattle Meat Market University Webinar, Moscow, ID – July, 2020.
- Bass, P.D. and M. Paul. National Beef Burger Day, Idaho Today, NBC Affiliates KTVB/BTFT, June, 2020.
- Bass, P.D. Staying positive – foodservice meat market update, Sysco Spokane General Sales Meeting Webinar, Moscow, ID – June, 2020.
- Bass, P.D. Now is the time – lamb & goat positioned for success!, Sheep and Goat Webinar, Moscow, ID – June, 2020.
- Bass, P.D., Saddles and sirloins – drivers of success!, Idaho Cattle Association Summer Roundup, Burley, ID – June, 2020.
- Bass, P.D. So you got a steak..., Idaho Beef Council Staff Training Webinar, April, 2020.
- Bass, P.D. and J. Hall. Cow herd nutritional effects and carcass quality, 2020 Idaho Extension Annual Conference Virtual In-Service Webinar – April, 2020.
- Bass, P.D., Beef fabrication demonstration – Taste at Twilight: Coeur d’Alene Food and Wine Festival, Coeur d’Alene, ID – February, 2020.
- Bass, P.D. and D.R. Woerner. Meat quality workshop: understanding your profit potential. North American Meat Institute – International Production & Processing Expo, Atlanta, GA – January, 2020.
- Bass, P.D., J. Nasados, and M.J. Colle. Understanding beef processing and products from a retail perspective – WinCo Foods Meat Department Manager Workshop, Kuna, ID – January, 2020.
- Bass, P.D. Capturing value through beef carcass quality – Lemhi County Winter Beef School, Salmon, ID – January, 2020
- Bass, P.D. Practices that optimize beef product quality – American Culinary Federation Idaho Chefs de Cuisine, Meridian, ID – November, 2019
- Bass, P.D. Practices that optimize product quality – American Culinary Federation Chefs de Cuisine of the Inland Northwest October Meeting, Margaret Ritchie School of Family and Consumer Sciences, Carmelita Spencer Foods Laboratory, Moscow, ID – October, 2019
- Bass, P.D. Improving consumer confidence and acceptance of beef – Kansas State University, Stockman and Stewardship Seminar, Manhattan, KS – September, 2019
- Bass, P.D. Guest lecture – Revisiting old-world meat artisan meats, EPPN 154 Microbiology and the World Around Us, Dr. Brenda Schoeder, Moscow, ID – April, 2019
- Bass P.D. and J. Nasados. Pork Workshop – From Harvest to Sausage: Sysco, Vandal Brand Meats, Moscow, ID – April, 2019

- Bass, P.D. The US land grant mission – Universidad Publica de Navarra Animal Science Faculty, Pamplona, Navarra, Spain – March, 2019
- Bass, P.D. Dairy production in the United States– Universidad Publica de Navarra Masters of Agriculture class, Pamplona, Navarra, Spain – March, 2019
- Bass, P.D. Factors contributing to meat quality and value in the United States – Universidad Publica de Navarra undergraduate Food Design class, Pamplona, Navarra, Spain – March, 2019
- Bass, P.D. Beef quality and carcass merchandising – Ontario Ministry of Agriculture, Farming, and Rural Affairs Beef Producers Workshop in association with the Beef Producers of Ontario organization, Thunder Bay, ON, Canada – January, 2019
- Bass, P.D., J. Nasados, and M.J. Colle. Beef quality, processing and Merchandising - WinCo Foods Workshop, Vandal Brand Meats, Moscow, ID – January, 2019
- Bass, P.D.. Capturing value through beef carcass quality – Idaho Range Livestock Symposium, (Marsing, Twin Falls, Pocatello, and Rexburg), ID – January, 2019
- Colle, M.J., J. Lancaster, J.B. Van Buren, T.M. Weber, and P.D. Bass, Beef Quality Update (sub-presentation “Factors Contributing to Beef Carcass Quality”), Presented at the 2018 Idaho Cattle Association Annual Conference, Sun Valley, ID – November, 2018
- Bass, P.D., J. Nasados. Pork workshop: from slaughter to sausage. Presented at Vandal Brand Meats to Sysco Spokane and The Coeur d’Alene Resort, Moscow, ID – October, 2018
- Bass, P.D., Factors contributing to beef carcass quality. Presented at the Stockmanship and Stewardship Seminar, Clemson University, Clemson, SC – August, 2018
- Bass, P.D., Basic Meat Science. Presented at the Northwest Meat Processors Association Sausage Workshop, Vandal Brand Meats, Moscow, ID – May 2018
- Bass, P.D., Factors contributing to the quality of beef. Presented at the Animal and Veterinary Sciences Genetics of Livestock In-Service Training, 2018 Extension Annual Conference, Moscow, ID – April, 2018
- Bass, P.D., Beef quality and value cuts of the short loin. Presented at Sysco Spokane – American Culinary Federation Chefs de Cuisine of the Inland Northwest, Post Falls, ID – January, 2018
- Richard, R., J. Nasados, M.J. Colle, and P.D. Bass. Understanding beef processing and products from a retail perspective – Winco Foods Meat Department Manager Workshop, Moscow, ID – January, 2018.
- Bass, P.D. Alternative beef cut fabrication and merchandising. Presented at the National Cattlemen’s Beef Association Annual Convention Learning Lounge, Nashville, TN – February, 2017
- Bass, P.D. Increasing interest in meat production/processing – renewed focus on old-world artisan meats and charcuterie. Presented at Purdue University – November, 2016
- Bass, P.D. Beef carcass 101. Presented at the University of Ontario, Ontario Beef Council Canadian Cattlemen Roundup – August, 2016
- Bass, P.D. Beef carcass utilization. Presented at the University of Ontario, Ontario Beef Council Canadian Cattlemen Roundup – August, 2015
- Bass, P.D. Fabrication and utilization of the beef chuck. Presented at the National Cattlemen’s Beef Association Annual Convention Learning Lounge, Nashville, TN – February, 2015

- Bass, P.D. Fabrication and merchandising of the beef loin. Presented at the National Cattlemen's Beef Association Annual Convention Cattlemen's College, Nashville, TN – February, 2014
- Bass, P.D. Alternative beef cut fabrication. Presented at the National Cattlemen's Beef Association Annual Convention Learning Lounge, Nashville, TN – February, 2014
- Bass, P.D. Innovative fabrication of the beef chuck, lamb hotel rack, and fresh pork leg for use in foodservice. Presented at the International Culinary Art Institute at Denver, Denver, CO – February, 2009
- Bass, P.D. and T.F. Nunes. Innovative fabrication of the beef chuck and fresh pork leg for use in foodservice. Presented at the International Culinary Art Institute at Denver, Denver, CO – November, 2008
- Bass, P.D. Merchandising ribeyes and striploins from heavy-muscled "out" beef carcasses. Webinar presentation on "No Better Bull," Leachman Cattle of Colorado Seminars, Wellington, CO – November 2008
- Bass, P.D. and J.A. Scanga. Alternative fabrication of the beef ribeye and striploin for foodservice. Presented at the Colorado Chef's Association at the National Western Stock Show, Denver, CO – January, 2008
- Bass, P.D. and T.F. Nunes. Beef and lamb fabrication for foodservice. Presented at the Denver Culinary Arts Institute, Denver, CO – December, 2007
- Bass, P.D. Beef and lamb fabrication for foodservice. Presented at the Denver Culinary Arts Institute, Denver, CO – October, 2007
- Bass, P.D. and T.F. Nunes. Beef and lamb fabrication for foodservice. Presented at the Denver Culinary Arts Institute, Denver, CO – August, 2007
- Bass, P.D., S.D. Howard, S.L. Gruber. Use of ultrasound for prediction of carcass content of show cattle, hogs, goats, and lambs. Presented at Dawes County Fair, Chadron, NE – July, 2007
- Bass, P.D. and T.F. Nunes. Beef and lamb fabrication for foodservice. Presented at the Culinary Arts Institute at Denver, Denver, CO – April, 2007
- Bass, P.D. and J.A. Scanga. Goat carcass fabrication. Presented at the Sheep and Goat Workshop, Castle Rock, CO – December, 2006

Honors and Awards:

- Outstanding Teaching Award, Department of Animal, Veterinary and Food Sciences, University of Idaho, 2022
- Distinguished Achievement Award, American Meat Science Association, 2018
- Top 25 Future Icon in the Meat Industry, The National Provisioner Magazine, 2016
- Top 10 Industry Leader Award, The Cattle Business Weekly Magazine, 2015
- 40 under 40 in Agriculture Award, Vance Publishing Corporation, 2014
- Graduate Teaching Award of Excellence, Cal Poly, San Luis Obispo, CA, 2006
- Reserve Grand Champion – California Association of Meat Processors Collegiate Fresh Sausage Competition, 2006
- Reserve Grand Champion – California Association of Meat Processors Collegiate Fresh Sausage

Competition, 2005

Runner-up Award – California State University Biological Sciences Research Competition, 2004

SCHOLARSHIP ACCOMPLISHMENTS: (Including scholarship of teaching and learning, artistic creativity, discovery, and application/integration)

Publications, Exhibitions, Performances, Recitals:

Refereed/Adjudicated: (i.e. books, book chaps., journals, proc., abstr., etc.; provide citations-author, date, title, publisher) (3 yr. rolling average: 3.66/yr.)

Barbar, C., **P.D. Bass**, R. Barbar, J. Bader, and B. Wondercheck. 2022. Artificial intelligence-driven automation is how we achieve the next level of efficiency in meat processing. *Anim. Frontiers* 12:40-48.

Lancaster, J.M., J.H. Smart, B.J. Buseman, T.M. Weber, K. Insausti, J.A. Nasados, B. Glaze, W.J. Price, M.J. Colle, and **P.D. Bass**. 2022. Assessment of dry-aged beef from commercial aging locations across the United States. *International Journal of Gastronomy and Food Science*. 27:100466

Lancaster, J.M., T.M. Weber, J.B. Van Buren, J.H. Smart, B.J. Buseman, J.A. Nasados, G.K. Murdoch, W.J. Price, M.J. Colle, and **P.D. Bass**. 2022. Beef carcass size and aging period on retail display characteristics of top round steaks. *Meat and Muscl. Bio*. 6(1):13219, 1-9

Van Buren, J.B., B.J. Buseman, T.M. Weber, J.A. Nasados, J.M. Lancaster, J.H. Smart, **P.D. Bass** and M.J. Colle. 2021. Extending the shelf-life of beef steaks using acerola cherry powder and rosemary extract. *Meat and Muscl. Bio*. 6(1):13217, 1-10

P.D. Bass. 2021. From trucks to tips – examples of peripheral ways by which the meat industry impacts the United States workforce economy. *Anim. Frontiers* 11(2):36-40

Insausti, K., M.T. Murillo-Arbizu, O. Urrutia, J.A. Mendizabal, M.J. Beriain, M.J. Colle, **P.D. Bass**, and A. Arana. 2021. Volatile compounds, odour, and flavour attributes of lamb meat from the Navarra breed as affected by aging. *Foods* 10:493

Lancaster, J.M, B.J. Buseman, T.M. Weber, J.A. Nasados, R.P. Richard, G.K. Murdoch, W.J. Price, M.J. Colle, and **P.D. Bass**. 2020. Impact of beef carcass size on chilling rate, pH decline, display color and tenderness of top round subprimals. *Transl. Anim. Sci*. 4:1-12

Buseman, B.J., T.M. Weber, J.A. Nasados, **P.D. Bass**, J.B. Van Buren, J.M. Lancaster, J.H. Smart, G.K. Murdoch, W.J. Price, K. Insausti, and M.J. Colle. 2020. Free calcium concentration, calpain-2 activity and final product tenderness of electrically stimulated beef. *Meat and Muscle Biol*. 4(1):24, 1-11

Weber, T.M., M.J. Colle, G.K. Murdoch, B.J. Buseman, J.M. Lancaster, J.B. Van Buren, J.A. Nasados, and **P.D. Bass**. 2020. Using genetic panels to predict tenderness in beef cattle. *Meat and Muscle Bio*. 4(1): 17, 1-8

Weber, T.M., B.J. Buseman, J.A. Nasados, J.M. Lancaster, J.B. Van Buren, J.H. Smart, **P.D. Bass**, G.K. Murdoch, K. Insausti, and M.J. Colle. 2020. Assessing outcomes of genetic selection panels to predict marbling in crossbred beef cattle. *Transl. Anim. Sci*. 4:1-9

Capouya, R.D., T. Mitchell, D.I. Clark, D.L. Clark, and **P.D. Bass**. 2020. A survey of microbial communities on dry-aged beef in commercial meat processing facilities. *Meat and Muscle Bio*. 4(1):1-22

Prill, L.L., L.N. Drey, E.A. Rice, B.A. Olson, J. M. Gonzalez, J.L. Vipham, M.D. Chao, **P.D. Bass**, M.J. Colle, and T.G. O’Quinn. 2019. Do published cooking temperatures correspond with consumer

and chef perceptions of steak degrees of doneness. *Meat and Muscle Bio.* (3:510-525)

- Prill, L.L, L.N, Drey, B.A. Olson, E.A. Rice, J.M. Gonzalez, J.L. Vipham, M.D. Chao, **P.D. Bass**, M.J. Colle, and T.G. O'Quinn. 2019. Visual degree of doneness impacts beef palatability for consumers with differing degree of doneness preferences. *Meat and Muscle Bio.* (3:411-423)
- Colle, M.J., R. Richard, M.C. Colle, W.I. Loucks, G.K. Murdoch, **P.D. Bass**, C.J. Williams, and M.E. Doumit. 2019. Retail display properties and consumer perception of extended aged beef topically treated with ascorbic acid. *Meat and Muscle Bio.* 3:42-50
- Acheson, R.J., D.R. Woerner, C.E. Walenciak, M.J. Colle, and **P.D. Bass**. 2018. Distribution of marbling throughout the *M. longissimus thoracis et lumborum* of beef carcasses using an instrument-grading system. *Meat and Muscle Bio.* 2:303-308
- Cannata, S., T.E. Engle, S.J. Moeller, H.N. Zerby, A. Radunz, **P.D. Bass**, M.D. Green, and K.E. Belk. 2010. Effect of visual marbling on sensory properties and quality traits of pork loin. *Meat Sci.* 85:428-434
- Moore, C.B., **P.D. Bass**, M.D. Green, P.L. Chapman, M.E. O'Connor, J.A. Scanga, J.D. Tatum, G.C. Smith, and K.E. Belk. 2010. Establishing an appropriate mode of comparison for measuring the performance of marbling score output from video image analysis beef carcass grading systems. *J. Anim. Sci.* 88:2464-2475
- Bass, P.D.**, K.E. Belk, G.C. Smith, and J.D. Tatum. 2010. Effects of sex and short-term magnesium supplementation on stress responses and Longissimus muscle quality characteristics of crossbred cattle. *J. Anim. Sci.* 88:349-360
- Bass, P.D.**, J.A. Scanga, P.L. Chapman, G.C. Smith, and K.E. Belk. 2009 Associations between portion size acceptability of beef cuts and ribeye area of beef carcasses. *J. Anim. Sci.* 87:2935-2942
- Bass, P.D.** J.L. Beckett, and R.J. Delmore. 2009 Case Study: Effects of ractopamine in combination with various hormone implant regimens on growth and carcass attributes in calf-fed Holstein steers. *The Professional Animal Scientist* 25:195-201
- Bass, P.D.**, D.L. Pendell, D.L. Morris, J.A. Scanga, K.E. Belk, T.G. Field, J.N. Sofos, J.D. Tatum, and G.C. Smith. 2008. Review of sheep traceability systems in countries outside of North America. *The Professional Animal Scientist* 24:302-307
- Bass, P.D.**, J.A. Scanga, P.L. Chapman, G.C. Smith, J.D. Tatum, and K.E. Belk. 2008. Recovering value from beef carcasses classified as dark cutters by USDA graders. *J. Anim. Sci.* 86:1658-1668
- Bass, P.D.**, D.M. Hooge, and E.A. Koutsos. 2006. Dietary thyroxine induces molt in chickens (*Gallus gallus domesticus*). *Comparative Biochemistry and Physiology* 146:335-341

Conference Proceedings/Abstracts/Scholarly Presentations (3 yr. rolling average: 5.33/yr.)

- Heimbuch, M.L., J.B. Van Buren, B.S. Epperson, K.F. Oliver, S.M. Jepsen, J.A. Nasados, D.A. Vinci, W.J. Price, K.R. Vierck, D.E. Konetchy, **P.D. Bass**, and M.J. Colle. 2022. Evaluation of growth, meat quality, and sensory characteristics of wool, hair and composite lambs. Pacific Northwest Animal Nutrition Conference. January, 2022.
- Oliver, K.F., J.B. Van Buren, J.B. Hall, M.L. Heimbuch, S. Jepsen, B. Epperson, J.A. Nasados, **P.D. Bass**, and M.J. Colle. 2022. Impact of maternal nutrition on postnatal growth of crossbred beef steers. Pacific Northwest Animal Nutrition Conference. January, 2022.
- Van Buren, J.B., B.J. Buseman, T.M. Weber, J.A. Nasados, J.M. Lancaster, J.H. Smart, **P.D. Bass**, and M.J. Colle. 2021. Extending the shelf-life of beef bone-in short rib steaks using combinations of acerola cherry powder and rosemary extract. Reciprocal Meat Conference, Reno, NV. August, 2021

- Wang, S, K.V. To, C. Dahlgren, C. Fornes, H. Hessler, X. Zhang, Y. Campbell, B. Buseman, **P. Bass**, M. Colle, M. Schilling, and T. Dinh. 2021. Free amino acid content in longissimus lumborum and semimembranosus muscles from electrically stimulated beef carcasses. Reciprocal Meat Conference, Reno, NV. August, 2021
- Epperson, B.S., K.J. Puga, J.B. Van Buren, J.A. Nasados, B.J. Buseman, J.M. Lancaster, K. Smith, **P.D. Bass**, K. Insausti-Barrenetxea, and M.J. Colle. 2021. Alternative merchandising strategy of the beef top round. Reciprocal Meat Conference, Reno, NV. August, 2021
- Lancaster, J., J. Smart, J. Van Buren, B. Epperson, J. Nasados, W. Price, M. Colle, **P. Bass**. 2021. Descriptive assessment of dry-aged beef from commercial aging locations across the United States. Reciprocal Meat Conference, Reno, NV. August, 2021
- Lancaster, J., M. Colle, B. Epperson, J. Smart, K. Oliver, H. Komine, A. Kano, Y. Sakaguchi, K. Kuchida, D. Cicale, and **P.D. Bass**. Preliminary assessment of the Meat Imaging Japan (MIJ) beef grading smart phone application as it compares to a current USDA validated beef grading camera vision system. Reciprocal Meat Conference, Reno, NV. August, 2021
- Oliver, K.F., J.B. Van Buren, J.B. Hall, M.L., Heimbuch, J.A. Nasados, **P.D. Bass**, and M.J. Colle. 2021. Impact of maternal nutrition on postnatal growth and carcass traits of crossbred beef steers. Reciprocal Meat Conference, Reno, NV. August, 2021
- Lancaster, J.M., J.H. Smart, B.J. Buseman, T.M. Weber, K. Insausti, J.A. Nasados, B. Glaze, W.J. Price, M.J. Colle, and **P.D. Bass**. 2021. Assessment of dry-aged beef from commercial aging locations across the United States. American Society of Animal Science Midwest Section Meeting. March, 2021
- Walker-Shira, K.A., B.M. Murdoch, A. Colacchio, K.M. Davenport, M.J. Colle, **P.D. Bass**, and G.K. Murdoch. 2021. Single nucleotide polymorphisms associated with advanced skeletal maturity in finished beef heifers. American Society of Animal Sciences Meeting. March, 2021
- Hall, J.B., J. Sprinkle, M. Ellison, S. Goddard, B. Murdoch, J.B. Glaze, **P. Bass**, and K. Lee. 2021. Comparison of range-based and irrigated cow/calf systems. Idaho Range Livestock Symposium. January, 2021
- Murillo, M.T., M.J. Beriain, J.A. Mendizabal, D. Garcia, M. Romano-Moreno, M.J. Colle, **P.D. Bass**, J.M. Lancaster, R. Barrena, and K. Insausti. 2020. Dry aging effects on the sensory quality of lean beef. European Conference on Sensory and Consumer Research. Rotterdam, The Netherlands, September 6, 2020.
- Buseman, B., T. Weber, J. Nasados, **P. Bass**, J. Van Buren, J. Lancaster, J. Smart, M. Doumit, G. Murdoch, W. Price, K. Insausti, and M. Colle. 2020. Free calcium concentration, calpain-2 activity, and final product tenderness of electrically stimulated beef. 66th International Congress of Meat Science and Technology and 73rd Reciprocal Meat Conference. Orlando, FL, August 2, 2020
- Lancaster, J.M, B.J. Buseman, T.M. Weber, J.A. Nasados, G.K. Murdoch, W.J. Price, M.J. Colle, and **P.D. Bass**. 2020. Impact of beef carcass size on chilling rate, pH, display color and tenderness of top round subprimals. 66th International Congress of Meat Science and Technology and 73rd Reciprocal Meat Conference. Orlando, FL, August 2, 2020
- Weber, T.M, B.J. Buseman, J.A. Nasados, J.M. Lancaster, J.B. Van Buren, J.H. Smart, G.K. Murdoch, K. Insausti, **P.D. Bass**, and M.J. Colle. 2020. Assessing outcomes of genetic selection panels to predict marbling in crossbred beef cattle. 66th International Congress of Meat Science and Technology and 73rd Reciprocal Meat Conference. Orlando, FL, August 2, 2020
- Van Buren, J.B., B.J. Buseman, T.M. Weber, J.A. Nasados, J.M. Lancaster, J.H. Smart, **P.D. Bass**, and M.J. Colle. 2020. Extending the shelf-life of beef chuck roll using acerola cherry powder and

rosemary extract. 66th International Congress of Meat Science and Technology and 73rd Reciprocal Meat Conference. Orlando, FL, August 2, 2020

- Bass, P.D.** and Y.H. Kim. Dry aging beef: bridging the gap between science and art – American Meat Science Association Educational Webinar Series – October, 2019
- Weber, T., M. Colle, J. Nasados, and **P. Bass**. 2019. Using genetic panels to determine tenderness in beef cattle. Western Section – American Society of Animal Sciences, Boise, ID – June 10, 2019
- Insausti, K. M.J. Colle, **P.D. Bass**, I. Goenaga, O. Urritia, J.A. Mendizabal, M.J. Beriain, and B. Soret. 2019. Effect of diet on bloom time of beef. American Meat Science Association Reciprocal Meat Conference, Fort Collins, CO – June 23, 2019
- Prill, L.L., T.G. O’Quinn, M.D. Chao, J.L. Vipham, J.M. Gonzalez, E.A. Boyle, T.A. Howser, M.J. Colle, and **P.D. Bass**. 2019. Profiling the impact of visual degree of doneness on palatability ratings of beef strip loin steaks served to consumers of differing degree of doneness preferences. American Meat Science Association Reciprocal Meat Conference, Fort Collins, CO – June 23, 2019
- Prill, L.L., T.G. O’Quinn, M.D. Chao, J.L. Vipham, J.M. Gonzalez, E.A. Boyle, T.A. Howser, M.J. Colle, and **P.D. Bass**. 2019. Chef and consumer evaluation of the degree of doneness of beef strip loin steaks cooked to six endpoint temperatures. American Meat Science Association Reciprocal Meat Conference, Fort Collins, CO – June 23, 2019
- Puga, K.J., J.B. VanBuren, J.A. Nasados, B.J. Buseman, **P.D. Bass**, K. Insausti, and M.J. Colle. 2019. Alternative merchandising strategy of the beef top round. American Meat Science Association Reciprocal Meat Conference, Fort Collins, CO – June 23, 2019
- Uhlenkott, A.L., J.M. Lancaster, I.W. Riley, J.A. Nasados, and **P.D. Bass**. 2019. Using a potato by-product to replace phosphate in enhanced whole-muscle turkey breast. American Meat Science Association Reciprocal Meat Conference, Fort Collins, CO – June 23, 2019
- Gouru, A., Z. Carlson, M.J. Colle, **P.D. Bass**, B. Murdoch, P. Rezamand, and G.K. Murdoch. 2019. Examining the effect of a physiological dose of the polyamine, spermine, on myogenic regulatory transcription factor expression. American Society of Animal Sciences Annual Meeting, Austin, TX – July 8, 2019
- P.D. Bass** and Y.H. Kim. Dry aging beef: bridging the gap between science and art – American Meat Science Association Reciprocal Meat Conference, Fort Collins, CO – June, 2019
- Lancaster, J.M. and **P.D. Bass**. 2019. Effects of beef carcass size on chilling rate, display color, pH and tenderness on the top round subprimals. University of Idaho Graduate Student Seminar, University of Idaho, Moscow, ID – February 27, 2019
- Bass, P.D.** Capturing value through beef carcass quality. Idaho Range Livestock Symposium – January 2019
- Bass, P.D.** 2018. Revisiting old-world artisan meats. Institute of Food Technologists Annual Meeting, Chicago, IL – July 2018
- Bass, P.D.** 2018. Beef cuts for the modern barbeque world. American Meat Science Association Reciprocal Meat Conference, Kansas City, MO – June, 2018
- Capouya, R., T.K. Mitchell, **P.D. Bass**, D. Clark, D. Clark. 2018. Comparison of microbial communities on dry aged beef between aging facilities. American Meat Science Association Reciprocal Meat Conference (Abstract), Kansas City, MO – June, 2018
- Bass, P.D.** 2016. Increasing interest in meat production/processing – renewed focus on old-world artisan meats and charcuterie. Presented at the American Meat Science Association Reciprocal Meat

Conference, San Angelo, TX – July, 2016

- Hergenreder, J.E., M.J. Anderson, L.D. Luque, **P.D. Bass**, W. Nichols, R.J. Delmore, J.L. Beckett, and B.J. Johnson. 2013. Predicting percent empty body fat in calf-fed Holstein steers using carcass measurements. Presented at the American Society of Animal Sciences Joint Annual Meeting, Indianapolis, IN – July, 2013
- Stika, J.F., **P.D. Bass**, and C.E. Walenciak. 2013. Industry issue or opportunity – increasing carcass weights. 2013. H.D. Ritchie Beef Production Symposium. Presented at the Midwest Section of the American Society of Animal Sciences meeting, Des Moines, IA – Jan. 2012
- Cannata, S., T.E. Engle, S.J. Moeller, H.N. Zerby, A Radunz, **P.D. Bass**, and K.E. Belk. 2009. Intramuscular fat and sensory properties of pork loin. Presented at the Associazione Scientifica di Produzione Animale Congress, Palermo, Sicily, Italy – 2009
- Bass, P.D.**, K.E. Belk, G.C. Smith, and J.D. Tatum. 2008 Merchandising ribeyes and striploins from heavy muscled “out beef carcasses. Presented at the National Cattlemen’s Beef Association Summer Conference, Denver, CO – July, 2008
- Bass, P.D.**, J.A. Scanga, K.E. Belk, T. Field, J.N. Sofos, J.D. Tatum, D.L. Pendell, and G.C. Smith. Evaluation of sheep traceability systems in countries other than Canada, USA, and Mexico. Presented at the National Animal Identification System – Animal Termination Records Initial Conference: Termination Records, Denver, CO – March, 2006
- Bass, P.D.**, J.L. Beckett, and R.J. Delmore. Effects of ractopamine in combination with various hormone implant regimens on growth and carcass attributes in calf-fed Holstein steers. Presented at the Western Section of American Society of Animal Sciences Conference, Logan, UT – June, 2006
- Bass, P.D.**, D.M. Hooge, and E.A. Koutsos. Effects of thyroxine-based molting treatments on performance of Bovan White Leghorn laying hens during a first molt and to peak egg production. Presented at the International Poultry Conference, Atlanta, GA – January, 2006
- Bass, P.D.**, C.G. Wyatt, and E.A. Koutsos. Effect of dietary phytase on second cycle laying hens: egg production and quality. Presented at the International Poultry Conference, Atlanta, GA – January, 2005

Technical Publications:

- Bass, P.D.** 2016. The scientific basis of the Certified Angus Beef brand carcass specifications. Tech. White Paper. pp. 1-25. Certified Angus Beef LLC, Wooster, OH
- Bass, P.D.** 2012. The facts: freezing and thawing beef. Tech. Fact Sheet. pp. 1-2. Certified Angus Beef LLC, Wooster, OH
- Green, M.D., **P.D. Bass**, R.J. Richmond, J.D. Tatum, G.C. Smith, and K.E. Belk. 2009. Validation of tenderness prediction instruments. pp. 1-24. Final report submitted to the National Cattlemen’s Beef Association, Centennial, CO
- Bass, P.D.** and K.E. Belk. 2008. Merchandising the ribeye roll and striploin from carcasses with non-conforming (too large) ribeye areas. Article submitted to the North American Meat Processors Assn. Newsline 66(37):3
- Bass, P.D.**, K.E. Belk, J.D. Tatum, G.C. Smith, and J.A. Scanga. 2008. Merchandising the ribeye and striploin from carcasses with non-conforming carcass weights (too heavy) and *Longissimus* muscle areas (too large). pp. 1-52. Final report submitted to National Cattlemen’s Beef Association, Centennial, CO
- Bass, P.D.** and J.A. Scanga. Overview of the current National Animal Identification System. Article submitted to the Colorado Association of Meat Processors, August, 2007

- Bass, P.D.**, K.E. Belk, M.B. Bowling, T.G. Field, S.H. Geleta, S.B. LeValley, J.M. Meisinger, R.G.L. Murphy, D.L. Pendell, J.A. Scanga, G.C. Smith, J.N. Sofos, J.D. Tatum, S.J. Jones, J. Maulsby, and D.L. Morris. 2007. Assessing the impact of the National Animal Identification System (NAIS) with regard to beef, pork and lamb harvesting and rendering facilities in the US. pp. 1-90. Final report to USDA-APHIS-VS, prepared by Colorado State University, Fort Collins, CO and the Colorado Department of Agriculture, Denver, CO
- Bass, P.D.**, J.A. Scanga, J.D. Tatum, G.C. Smith, and K.E. Belk. 2007. Adding value to non-conforming “out” beef carcasses. pp. 1-49. Final report submitted to the National Cattlemen’s Beef Association. Prepared by Colorado State University, Fort Collins, CO
- Bass, P.D.**, K.E. Belk, J.A. Scanga, J.N. Sofos, and G.C. Smith. Specified risk materials: glossary of terms. Report submitted to Unites State Meat Export Federation, October, 2006
- Bass, P.D.**, K.E. Belk, J.N. Sofos, J.A. Scanga, and G.C. Smith. Effects of 5% lactic acid applications on Enterobacteriaceae levels and prevalence of Salmonella through a low temperature edible rendering process. Final report submitted to a proprietary company, October 2006
- Bass, P.D.** and J.A. Scanga. Effects of various grinding techniques and pH adjustments on sensory characteristics of ground beef patties. Final report submitted to a proprietary compay, September, 2006
- Luque, **P.D. Bass**, R.J. Delmore, and J.L. Beckett. 2006. Effects of implants on physiological growth and carcass attributes in Holstein steers. Final report submitted to proprietary company, December, 2006
- Bass. P.D.**, C.G. Wyatt, and E.A. Koutsos. Effect of dietary phytase on second cycle laying hens: egg production and quality. Final report submitted to a proprietary company, January, 2005

Refereed/Adjudicated Currently Scheduled or Submitted:

- Jepsen, S.M., J.B. Van Buren, B.S. Epperson, M.L. Heimbuch, K.F. Oliver, J.A. Nasados, M.J. Colle, and P.D. Bass. 2022. Alternative fabrication and muscle profiling of the beef top sirloin butt. *Meat and Muscle Bio.* (In preparation)
- Smart, J.H., J. Williams, J.M. Lancaster, J.B. Van Buren, B.J. Buseman, T.M. Weber, K. Insausti, J.A. Nasados, M.J. Colle, and **P.D. Bass**. 2022. Survey of microbiota on commercially available dry-aged beef. *Animals.* (In preparation)
- Van Buren, J.B., K.J. Puga, K.C. Hoffman, J.A. Nasados, **P.D. Bass**, and M.J. Colle. 2022. Water binders in beef patties increase yield and extend shelf life. *Transl. Anim. Sci.* (In preparation)
- Heimbuch, M.L., J.B. Van Buren, B.S. Epperson, S.M. Jepsen, K.F. Oliver, J.A. Nasados, D.A. Vinci, D.E. Konetchy, W.J. Price, K.R. Vierck, **P.D. Bass**, and M.J. Colle. 2022. Evaluation of growth, meat quality and sensory characteristics of wool, hair, and composite lambs. *J. Anim. Sci.* (In preparation)
- Epperson, B.S., J.B. Van Buren, M.L. Heimbuch, S.M. Jepsen, K.F. Oliver, J.A. Nasados, W.J. Price, M.J. Colle, and **P.D. Bass**. 2022. Identifying alternative beef cuts suitable for use as beef finger steaks. *Meat and Muscle Bio.* (In preparation)
- León-Ecay, S., A. López-Maestresalas, M.T. Murillo-Arbizu, M.J. Beriain, J.A. Mendizabal, S. Arazuri, C. Jarén, **P.D. Bass**, M.J. Colle, D. García, M. Romano-Moreno, and K. Insausti. 2022. Classification of beef longissimus dorsi muscle tenderness using hyperspectral imaging and chemometrics. *Foods.* (Accepted 10/19/22)
- Miller, R.K., L.S. Papadopoulos, T.L. Wheeler, R.A. Gray, M.E. Dikeman, J. Claus, C. Owens-Hanning, W. Shilling, D.A. King, K.E. Belk, **P.D. Bass**, C.R. Calkins, M.F. Miller, S.D. Shackelford, and

B. Wasser. 2021. Research Guidelines I: Cutting, handling and cookery methods for sensory or texture evaluation of meat. *Meat and Muscle Bio*. Accepted.

Educational Video Productions:

- Bass, P.D. 2022. Learn the Art of Butchery – Beef Loin. Produced and published by Food, Agriculture, and Restaurant Establishments (FARE) Idaho. August, 2022.
- Bass, P.D., and K.C. Hoffman. 2021. Meat science career opportunities. Produced and published for the American Meat Science Association membership committee. September, 2021.
- Bass, P.D. 2021. Opportunities in meat science. Produced and published for Lemhi County Extension Ag Days. March, 2021.
- Bass, P.D., and J.M. Lancaster. 2020. Beef retail cuts. Produced and published for AVS 363. March, 2020.
- Bass, P.D., and J. Nasados. 2020. Fresh sausage lab. Produced and published for AVS 363. March, 2020.
- Bass, P.D., and J.M. Lancaster. 2020. Emulsified products lab. Produced and published for AVS 363. March, 2020.
- Bass, P.D., and J. Nasados. 2020. Hams and bacons lab. Produced and published for AVS 363. March, 2020.
- Bass, P.D., and J. Nasados. 2020. Cooked and cured sausage lab. Produced and published for AVS 363. March, 2020.
- Bass, P.D., and J.M. Lancaster. 2020. Beef hindquarter cuts. Produced and published for AVS 363. March, 2020.
- Bass, P.D., and K.C. Hoffman. 2018. Breaking down a beef strip loin. Produced for the American Meat Science Association. September, 2018 (publication pending)
- Bass, P.D., and K.C. Hoffman. 2018. Breaking down a whole chicken. Produced for the American Meat Science Association. September, 2018 (publication pending)
- Bass, P.D., and K.C. Hoffman. 2018. What's in a meat label. Produced for the American Meat Science Association. September, 2018 (publication pending)
- Bass, P.D. 2015. Alternative fabrication of the beef boneless strip loin. Produced by Certified Angus Beef LLC. November, 2015
- Bass, P.D. 2015. Alternative fabrication of the beef boneless lip-on ribeye. Produced by Certified Angus Beef LLC. November, 2015
- Bass, P.D. 2015. Ground beef facts. Produced by Certified Angus Beef LLC. November, 2015
- Bass, P.D. 2015. Ground trends. Produced by Certified Angus Beef LLC. November, 2015
- Bass, P.D. 2015. Ground beef specialty grinds. Produced by Certified Angus Beef LLC. November, 2015
- Bass, P.D. 2015. Ground beef facts. Produced by Certified Angus Beef LLC. November, 2015
- Bass, P.D. and P. Rosenberg 2015. Value cuts from the beef bottom sirloin. Produced by Certified Angus Beef LLC. November, 2015
- Bass, P.D. and P. Rosenberg. 2015. Hispanic foodservice opportunity beef cuts. Produced by Certified Angus Beef LLC. March, 2015

Bass, P.D. 2013. Beef portion control calculations. Produced by Certified Angus Beef LLC. December, 2014

Bass, P.D. 2013. Enzymatic tenderization during the aging of beef. Produced by Certified Angus Beef LLC. August, 2013

Bass, P.D. 2013. Fabrication of the beef top sirloin. Produced by Certified Angus Beef LLC. August, 2013

Bass, P.D. 2013. The primals of a beef carcass. Produced by Certified Angus Beef LLC. August, 2013

Bass, P.D. 2013. The importance of marbling on a beef carcass. Produced by Certified Angus Beef LLC. August, 2013

Bass, P.D. 2013. The ten *Certified Angus Beef*[®] brand carcass specifications. Produced by Certified Angus Beef LLC. August, 2013

Grants and Contracts Awarded: (provide principal and co investigators, title, sponsor, funding dates, amount)

Funded: (\$1,100,213)

Competitive Funding:

Colle, M.J., **P.D. Bass**, J.A. Nasados, M. McGuire, and J.B. Van Buren. 2022. Utilization of an alternative fabrication method to improve meat quality of heavy weight beef carcasses. \$48,104

Bass, P.D. and M.J. Colle. 2022. American lamb quality audit and assessment project. \$39,500

Colle, M.J., **P.D. Bass**, J.A. Nasados, M. McGuire, and J.B. Van Buren. 2022. Utilization of an alternative fabrication method to improve meat quality of heavy weight beef carcasses. \$48,104

Popova, I, M.J. Colle, and **P.D. Bass**. 2021. Improving yield, shelf stability, and sensory characteristics of meats using novel mustard derived value-added products. *USDA – National Institute of Food and Agriculture. Co-PI*. October, 2021. \$270,060. (6-1-2022 to 5-30-2024)

Bass, P.D., and M.J. Colle. 2022. Telling the story of quality Idaho beef. Idaho Cattle Foundation Unclaimed Livestock Committee Public/Higher Education Fund. **Principal Investigator**. \$9,000

Bass, P.D. and M.J. Colle. 2021. American lamb quality audit and assessment project. \$39,500.

Bass, P.D., and M.J. Colle. 2022. Telling the story of quality Idaho beef. Idaho Cattle Foundation Unclaimed Livestock Committee Public/Higher Education Fund. **Principal Investigator**. \$9,000

Bass, P.D., and M.J. Colle, 2022. What's the big deal with big beef? National Cattlemen's Beef Association. **Principle Investigator**. \$8,000

Popova, I, M.J. Colle, and **P.D. Bass**. 2021. Improving yield, shelf stability, and sensory characteristics of meats using novel mustard derived value-added products. *USDA – National Institute of Food and Agriculture. Co-PI*. October, 2021. \$270,060. (6-1-2022 to 5-30-2024)

Bass., P.D. 2021. Telling the story of quality Idaho beef. *Idaho Cattle Foundation Unclaimed Livestock Committee Public/Higher Education Fund. Principal Investigator*. \$9,000

Hall, J.B., B. Glaze, S. Williams, J. Sprinkle, J. Packman, B. Eborn, H. Tejeda, M. Ellison, and **P. D. Bass**. 2021. Advanced Ranch Management School. *Extension Innovative Project Award*. Co-investigator. \$7,962

- Bass, P.D.**, M.J. Colle, J. Nasados, and J. Lancaster. 2021. Initial validation of a portable beef grading camera system (Meat Imaging Japan). *Mary A. Turner Endowment*. \$5,000.
- Bass, P.D.** and M.J. Colle. 2021. National beef quality audit – 2021. *National Cattlemen’s Beef Association*. \$9,000.
- Bass, P.D.**, M.J. Colle, J. Nasados, J. Legako, D. Woerner, and B. Kim. 2021. Sensory and chemical characterization of commercially dry-aged beef. *Idaho Beef Council*. **Principal Investigator**. January 2021, \$70,666.
- Bass, P.D.**, M.J. Colle, J. Nasados, M. McGuire and J.M. Lancaster. 2021. Identifying alternative beef cuts suitable for use as beef finger steaks. *Idaho Beef Council*. **Principal Investigator**. January 2021, \$47,144.
- Bass, P.D.**, M.J. Colle, and J. Nasados. 2021. Investigating alternative fabrication styles of the beef top sirloin butt (NAMI #184) through muscle specific fabrication into custom cuts. *Idaho Beef Council*. **Principal Investigator**. January 2021, \$51,806.
- Colle, M.J. **P.D. Bass**, J. Nasados and J. Van Buren. 2021. Extending steak shelf-life of frozen beef using combinations of acerola cherry powder and rosemary extract in order to remain competitive in the international market. *Idaho Beef Council*. **Co-PI**. January 2021, \$36,064.
- Colle, M.J., **P.D. Bass**, J. Nasados, A. Duncan, M. Heimbuch, D. Konetchy, M. Larson, K. Vierck and D. Vinci. 2021. Evaluation of growth, meat quality and sensory characteristics of wool, hair, and wool/hair lambs. *National Sheep Industry Improvement Center*. Co-investigator. \$43,198.
- Colle, M.J. and **P.D. Bass**. 2021. Replacing soy and sodium phosphate with ‘all-natural’ Colorado quinoa and Sustagrain as binders in beef patties. *Ardent Mills*, Co-investigator. \$21,358.
- Colle, M.J., D.E. Konetchy, and **P.D. Bass**. 2020. *Evaluation of growth, meat quality and sensory characteristics of wool, hair, and wool/hair lambs*. Co-Investigator, October 2020, \$43,198
- Murdoch, G.K., B. Murdoch, **P.D. Bass**, M.J. Colle, J. Nasados. 2019. Idaho Beef Council, *Advanced carcass maturity: developing and understanding, screening method and possible solution*, Co-investigator, March, 2019, \$34,875
- Bass, P.D.**, M.J. Colle, G.K. Murdoch, B. Murdoch, J. Williams, P. Rezamand, M. McGuire, M. McGuire, T. Mitchell. 2019. Idaho Beef Council, *Functional importance of microbiota on sensory attributes of whole-muscle dry-aged beef*, **Principle Investigator**, March 2019, \$42,890
- Colle, M.J., **P.D. Bass**, J. Nasados. 2019. Idaho Beef Council, *Extending the shelf-life of beef steaks using acerola cherry powder and rosemary extract in order to remain competitive in the international market*. Co-Investigator, March, 2019, \$31,108
- Bass, P.D.**, M.J. Colle, G.K. Murdoch. 2019. National Cattlemen’s Beef Association, *Effect of beef carcass size and aging period on display color, tenderness, and palatability of steaks from the inside round*. **Principle Investigator**. February, 2019, \$38,495
- Bass, P.D.**, M.J. Colle, R. Richard, J. Nasados, and G.K. Murdoch. 2018. Mary A. Turner Endowment, *Effects of beef carcass size on chilling rate, display color, pH, and tenderness on the top round subprimal*. **Principle Investigator**. May, 2018, \$4,784

Non-Competitive Funding:

- Bass, P.D.** 2020. Open Access Publishing Fund. Administered through the University of Idaho Library. Approved funding for publishing a manuscript in the journal *Meat and Muscle Biology*. **Principle Investigator**. February and November, 2020, \$2,429

Bass, P.D. 2019. Open Access Publishing Fund. Administered through the University of Idaho Library. Approved funding for publishing a manuscript in the journal *Meat and Muscle Biology*. **Principle Investigator**. January, 2019, \$1,500

Colle, M.J. and **P.D. Bass**. 2019. Open Access Publishing Fund. Administered through the University of Idaho Library. Approved funding for publishing a manuscript in the journal *Meat and Muscle Biology*. Co-Investigator. January, 2019, \$1,200

Bass, P.D. 2018. Erasmus International Professional Development Opportunity for CALS Faculty One-Week Visiting Professorship, School of Agricultural Engineering, Public University of Navarra, Pamplona Spain. **Principle Investigator**. May, 2018, \$2,048

Bass, P.D. 2018. University of Idaho College of Graduate Studies grant for visiting potential graduate student travel. **Principle Investigator**. March 2018, \$400

In Progress: (\$123,801)

Colle, M.J., **P.D. Bass**, B.A. Foraker, J.B. Van Buren, and J. Nasados. 2022. Evaluation of fresh and frozen aging strategies to mitigate supply chain challenges. National Cattlemen's Beef Association. November, 2022. \$53,886.

Foraker, B.A., J.A. Unruh, M. Du, P.S. Kuber, M.J. Colle, and **P.D. Bass**. 2022. Identifying relationships between empty body weight, specific gravity, and dissectible carcass composition in heterogenous beef cattle. National Cattlemen's Beef Association. 2022. \$69,915.

Not Funded: (\$5,982,629)

Colle, M.J., **P.D. Bass**, E. Billings, R. Collier, M.A. McGuire. 2022. Meat and poultry processing expansion program. USDA. \$2,487,950

Bass, P.D., M.J. Colle, J.A. Nasados, M. McGuire, and J.B. Van Buren. 2022. Benefits of extended aging on cull cow beef top rounds. National Cattlemen's Beef Association. \$49,494

Colle, M.J. and **P.D. Bass**. 2021. National Sheep Industry Improvement Center. *Dissemination of results from the comparison of wool, hair, and wool/hair lambs*. **Principle investigator**. September, 2021. \$10,012.

Colle, M.J. and **P.D. Bass**. 2021. Foundation for Meat & Poultry Research & Education. *Utilization of electrical stimulation and a unique alternative fabrication method to improve meat quality and value of heavy weight beef carcasses*. **Principle Investigator**. August, 2021. \$81,676.

M.J. Colle, **P.D. Bass**, J. Hall, J. Nasados, and K. Oliver. 2021. Mary A. Turner Endowment. *Impact of maternal nutrition on gestational growth, postnatal growth, and meat quality in crossbred beef cattle*. **Principal Investigator**. March, 2021. \$4,991.

Vierck, K.R., M.J. Colle, J.M. Lancaster and **P.D. Bass**. 2021. Impact of beef carcass size, and aging period, on flavor precursors and final beef flavor development of steaks from the round. *National Cattlemen's Beef Association*. April, 2021. \$65,760.

Bass, P.D., M.J. Colle, J. Nasados and J.M. Lancaster. 2021. Investigating the effects of alternative fabrication of large beef carcasses on chilling rate, display color, pH, and tenderness on the top round and knuckle subprimals. *Idaho Beef Council*. **Principal Investigator**. January 2021, \$49,246.

Bass, P.D., M.J. Colle, J. Nasados, M. McGuire, B. Glaze, J.B. Hall, J. Church, C. Willmore, A. Ruth, M.

- Small, S. Ball, S. Baker, S. Jensen, and S. Williams. 2021. Evaluation of the beef bottom round flat as a viable and profitable alternative to beef brisket flat for use in smoked meat preparation. *Idaho Beef Council. Principal Investigator*. January 2021, \$51,012.
- Colle, M.J. **P.D. Bass**, J.B. Hall, J. Nasados and K.F. Oliver. 2021. Comparison of two common Idaho production systems (irrigated pasture vs. rangeland) regarding gestational growth, postnatal growth, and meat quality of crossbred beef cattle. *Idaho Beef Council. Co-PI*. January 2021, \$49,746.
- Colle, M.J., **P.D. Bass**, M. McGuire, J. Nasados, B. Glaze, J.B. Hall, M. Ellison, A. Ruth, C. Willmore, J. Church, M. Small, S. Ball, S. Baker, S. Jensen, S. Williams, C. Schoepflin. 2021. Discovering Idaho Beef. *Idaho Beef Council. Co-PI*. January, 2021, \$48,717.
- Colle, M.J. and **P.D. Bass**. 2020. USDA Dry Pea & Lentil Council, *Replacing allergenic soy and non-natural sodium phosphate with non-allergenic and 'all-natural' pulse crops as binders in beef patties*. Co-investigator, November, 2019, \$31,968
- Colle, M.J., **P.D. Bass**, J. Schovic, J. Nasados, and K.C. Hoffman. 2020. US Economic Development Association Coronavirus Aid, Relief, and Economic Security Act Application. Co-investigator. August, 2020, \$664,020
- Colle, M.J., **P.D. Bass**, J. Schovic, J. Nasados, and K.C. Hoffman. 2020. US Economic Development Association Coronavirus Aid, Relief, and Economic Security Act Application. Co-investigator. August, 2020, \$408,578
- Colle, M.J. and **P.D. Bass**. 2020. USDA Rural Development. *Pacific Northwest livestock and meat science agriculture innovation demonstration center*. Co-investigator. July, 2020, \$551,495
- Bass, P.D.**, M.J. Colle, G.K. Murdoch, and J. Nasados. 2020. National Cattlemen's Beef Association, *Effects of alternative fabrication of large beef carcasses on chilling rate, display color, pH, and tenderness on the top round subprimal*. **Principle Investigator**, February, 2020, \$36,458
- Bass, P.D.**, M.J. Colle, G.K. Murdoch, and P. Rezamand. 2020. National Cattlemen's Beef Association, *Evaluation of the beef bottom round flat as a viable and profitable alternative to beef brisket flat for use in smoked meat preparation*. **Principle Investigator**, February, 2020, \$31,798
- Colle, M.J., **P.D. Bass**, and G.K. Murdoch. 2020. National Cattlemen's Beef Association, *Effect of electrical stimulation on beef carcass quality and product palatability of heavy weight carcasses*. Co-Investigator, February, 2020, \$35,972
- Popova, I., M.J. Colle, and **P.D. Bass**. 2020. National Cattlemen's Beef Association, *Mustard meal extracts as natural additive to prevent spoilage in fresh and precooked beef patties*. Co-investigator, February, 2020, \$49,158
- Legako, J., D. Woerner, B. Kim, M.J. Colle, and **P.D. Bass**. 2020 National Cattlemen's Beef Association. *Sensory and chemical characterization of commercially available dry-aged beef*. Co-investigator, February, 2020, \$45,918
- Murdoch, G.K., M.J. Colle, and **P.D. Bass**. 2019. Idaho Beef Council, *Assessing de novo synthesis and breakdown of antioxidants in muscle and blood of beef cattle*. Co-investigator, March, 2019, \$48,975
- Bass, P.D.**, M.J. Colle, and G.K. Murdoch. 2019. Idaho Beef Council, *Effect of beef carcass size and aging period on display color, tenderness, and palatability of steaks from the inside round*, **Principle Investigator**, March 2019, \$30,910

- Colle, M.J., **P.D. Bass**, G.K. Murdoch, P. Rezamand, J. Nasados, and M. McGuire. 2019. Idaho Beef Council, *Influence of dry heat cooking method and degree of doneness on beef strip loin amino acid content, fatty acid profile, fat-soluble vitamin content and nutrient composition*, Co-Investigator, March, 2019, \$49,183
- Bass, P.D.**, M.J. Colle, G. K. Murdoch, P. Rezamand, J. Nasados, M. McGuire. 2019. Idaho Beef Council, *Evaluation of the beef bottom round flat as a viable profitable alternative to beef brisket flat for use in a smoked meat preparation*, **Principle Investigator**, March 2019, \$17,884
- Colle, M.J., **P.D. Bass**, and G.K. Murdoch. 2019. Idaho Beef Council, *Understanding the role of electrical stimulation on activation of Calpain-2*, Co-Investigator, March 2019, \$39,305
- Colle, M.J., **P.D. Bass**, and G.K. Murdoch. 2019. Idaho Beef Council, *Predicting commercial beef carcass tenderness using genetic testing*, Co-Investigator, March, 2019, \$28,570
- Bass, P.D.**, M.J. Colle, G.K. Murdoch, B. Murdoch, J. Williams, P. Rezamand, M. McGuire, M. McGuire, T. Mitchell. 2019. National Cattlemen's Beef Association, *Functional importance of microbiota on sensory attributes of whole-muscle dry-aged beef*. **Principle Investigator**. February, 2019, \$42,930
- Colle, M.J., **P.D. Bass**, and G.K. Murdoch. 2019. National Cattlemen's Beef Association, *Using genetic panel information to predict carcass quality traits of beef cattle and its benefits to cattle producers*. Co-investigator, February, 2019, \$29,105
- Colle, M.J., **P.D. Bass**, and G.K. Murdoch. 2019. National Cattlemen's Beef Association, *Utilizing electrical stimulation to improve beef tenderness by activating calpain-2*. Co-investigator, February 2019, \$39,901
- Willmore, C., S. Hines, J. Packham, J. Hall, M. Ellison, **P.D. Bass**, and M.J. Colle. 2018. Western SARE, Co-investigator, *Utilizing cover crops for background cattle in Idaho*. November, 2018, \$136,893
- Clark, D.L., T. Mitchell, L. Moraes, and **P.D. Bass**. 2018. USDA-AFRI, Co-Investigator, *Identifying and reducing microbial safety concerns of dry-aged beef*. July, 2018, \$499,991
- Bass, P.D.**, M.J. Colle, P. Rezamand, and G.K. Murdoch. 2018. National Cattlemen's Beef Association, Product Quality Research, *Enhancing the value of beef top sirloin through muscle specific fabrication into custom cuts*. **Principle Investigator**, March, 2018, \$41,915
- Colle, M.J., **P.D. Bass**, G.K. Murdoch, and P. Rezamand. National Cattlemen's Beef Association, Product Quality Research proposal, Co-PI, *Influence of dry heat cooking method and degree of doneness on beef strip loin amino acid content, fatty acid profile, fat-soluble vitamin content, and nutrient composition*. March, 2018, \$49,836
- Bass, P.D.**, M.J. Colle, G.K. Murdoch, B. Murdoch, J. Williams, P. Rezamand, M. McGuire, M. McGuire, T. Mitchell. 2018. National Cattlemen's Beef Association, Product Quality Research proposal, *Functional importance of microbiota on sensory attributes of whole-muscle dry aged beef*. **Principle Investigator**, March, 2018, \$49,990
- Bass, P.D.**, M.J. Colle, and G.K. Murdoch. 2018. University of Idaho Office of Research and Economic Development, Equipment and Infrastructure Support Awards. *Refrigerated truck acquisition for improving meat science product transportation*. **Principle Investigator**. March, 2018, \$24,250
- Colle, M.J. and **P.D. Bass**. 2018. University of Idaho Budget and Finance Committee Proposal, Co-PI, *UI BBQ Boot Camp and Vandal Griller Certification*. January, 2018, \$44,394
- Bass, P.D.**, M.J. Colle, G. Murdoch, and P. Rezamand. 2018. National Cattlemen's Beef Association, Product Quality Research, Co-PI, *Influence of dry heat cooking method and degree of doneness on*

beef strip loin amino acid content, fatty acid profile, fat-soluble vitamin content, and nutrient composition. Principle Investigator, January, 2018, \$59,619

Gifts/Donations: (\$41,566 cash; \$23,987 In-kind; Total \$65,553)

Axiota, cash gift for meat science program (\$15,500)

Kansas Cattle Association, in-kind travel donation (\$800), June, 2022

WinCo Foods, in-kind donation of meat wrapping machine (\$10,000), May, 2021

Meat Imaging Japan, in-kind donation of beef grading camera kit and software (\$2,300), February, 2021

Sysco Spokane, in-kind meat donation for Student Idaho Cattle Association and AVS 363 (\$160 meat product in-kind), April, 2021

Idaho Beef Council, in-kind donation of meat for Extension workshop (\$244 meat product in-kind).
November, 2020.

WinCo, in-kind donation of retail meat auto-wrapper equipment (\$10,000 equipment in-kind). July, 2020.

Idaho Beef Council, in-kind donation of meat for educational videos (\$135 meat product in-kind).
November, 2020.

Farm Bureau, in-kind travel donation for workshop in Salmon, ID. (\$300 travel in-kind). January, 2020.

WinCo, cash gift donation toward meat science program (\$8,066). January, 2020

American Meat Science Association, donated travel in-kind for Student American Meat Science
Association board meeting in Kansas City, MO. (\$450 travel in-kind). October, 2019

Kansas Cattlemen's Association, donated travel in-kind for Stockmanship and Stewardship conference in
Manhattan, KS. (\$800 travel in-kind). October, 2019

Newport Meat Company cash gift donation toward meat science program (\$3,500). July 2019

Sysco Spokane cash gift donation toward meat science program (\$2,000 cash; \$220 travel in-kind). July
2019

Sysco Spokane, in-kind meat donation for teaching and outreach programs to help educate about beef
quality and palatability (\$320 in-kind meat product). April 2019

Sysco Spokane cash donation toward Vandal Brand Meats general program (\$1,000). April 2019

Beef Farmers of Ontario, donated gift dollars and in-kind travel to meat science program (\$2,500 cash,
\$1,045 in-kind travel), January 2019

Kings River Ranch, donated gift dollars and in-kind to help teach new graduate assistants about carcass
data collection and Warner-Bratzler Shear Force analyses. (\$5,000 cash, \$5,380 in-kind meat
product) March, 2018

Sysco Spokane, in-kind meat donation for teaching and outreach programs to help educate about beef quality and palatability (\$320 in-kind meat product). April, 2018

National Cattlemen's Beef Association, in-kind travel funding to present at Clemson University Stockmanship and Stewardship conference. (\$1,040 in-kind travel reimbursement). August, 2018

Sysco Spokane cash donation toward Vandal Brand Meats general program. (\$1,000). October 2018

Certified Angus Beef LLC, donated a cash gift amount to the meat science program (\$3,000) as well as travel reimbursement in-kind gift (\$1,312) to help educate US and international stakeholders on beef quality and merchandising. October, 2018

SERVICE:

Major Committee Assignments: (International, National, State, District, County, University, College, Departmental and dates)

International:

North American Meat Institute 9th ed. Meat Buyer's Guide Revision Committee – Beef Section. 2019

Student Research Poster Competition Sustainability Master's Division, International Congress of Meat Science and Technology. 2019

National:

American Meat Science Association Beef Grading Committee. 2022

American Meat Science Association Membership and Outreach Committee. 2022

North American Meat Institute 2022 Student Scholarship Review Committee. 2022

North American Meat Institute 2021 Student Scholarship Review Committee. 2021

American Meat Science Association Membership Committee. 2021

North American Meat Institute 2020 Student Scholarship Review Committee. 2020

Reciprocal Meat Conference (RMC) 2020 Planning Committee, American Meat Science Association. 2020

Reciprocal Meat Conference (RMC) 2019 Planning Committee, American Meat Science Association. 2019

Distinguished Achievement Award 2019 Selection Committee, American Meat Science Association. 2019

American Meat Science Association Student Board of Directors Academic Advisor. 2018-2020

Reciprocal Meat Conference (RMC) 2018 planning committee Wednesday Concurrent Session, American Meat Science Association, 2018

Editorial Board Member of the National Provisioner magazine. 2015-Present

College:

University of Idaho Meat Lab Assistant Manager Search Committee. 2019, 2021

Palouse Research Extension and Education Center Research Specialist Search Committee, December 2020

Meat Science Innovation Center Design Committee, Since 2019

University of Idaho Beef Center Manager Selection Committee, December 2017

Student Idaho Cattle Association Advisor, Since 2017

Departmental:

Food Science Fermentation Science Option Curriculum Committee. 2020

Food Science Dairy Product Management Option Curriculum Committee. 2020

Animal and Veterinary Sciences Business Option Curriculum Committee. 2020

Jessie Van Buren Master's Degree Committee. 2020 - Present

Assistant Meat Lab Manager Search Committee – Chair. 2019

Jessica Lancaster Ph.D. Degree Committee – Chair. 2018 - Present

Tanya Weber Master's Degree Committee. 2018 - 2020

Brianna Buseman Master's Degree Committee. 2018 - 2020

Antonetta Colacchio Master's Degree Committee. 2018 - 2019

Avani Gouru Master's Degree Committee. 2018 - 2019

Outstanding Graduate Student Award Ad Hoc Committee – College of Agriculture and Life Sciences, March 2018

Professional and Scholarly Organizations (including memberships, committee assignments, editorial services, offices held and dates)

Professional Memberships:

Affiliate Faculty, Washington State University Department of Food Sciences (2020 – Present)

Idaho Cattle Association (2018 – Present)

National Cattlemen's Beef Association (2007 – 2015)

American Society of Animal Sciences (2005 – 2021)

Federation of Animal Sciences Society (2005 – 2021)

American Meat Science Association (2003 – Present)

Editorial Publications and Popular Press:

Bustillo, X. 2022. Reviving a dying trade: Biden turns to colleges for meatpacking labor. Published in *Politico Pro*. Primary Source.

Van Buren, J.B., P.D. Bass, and M.J. Colle. 2022. Natural antioxidants improve beef shelf life and potentially increase international demand. Published in *Progressive Cattle* magazine.

Bass, P.D. Perfecting the prime rib. Published in *Progressive Cattle*. December, 2021.

Williams, M. Beef prices Rise 20.1% due to increased consumer demand and labor shortage. Published in CNS News. Primary Source.

- Bass, P.D. Beef – it’s far more than just what’s for dinner. Published in the *Line Rider*, September, 2021.
- Weber, T.M., B.J. Buseman, J.A. Nasados, J.M. Lancaster, J.B. Van Buren, J.H. Smart, G.K. Murdoch, K. Insausti, P.D. Bass, and M.J. Colle. May, 2021. “Assessing outcomes of genetic selection panels to predict marbling in crossbred beef cattle.” *The National Provisioner*. May, 2021.
- Van Buren, J.B., B.J. Buseman, T.M. Weber, J.A. Nasados, J.M. Lancaster, J.H. Smart, P.D. Bass, and **M.J. Colle**. April 2021. “Extending the shelf-life of beef chuck roll steaks using acerola cherry powder and rosemary extract.” *MeatingPlace*. Bryant, G.V., Online shopping for beef gains traction. Interviewed as a primary source, published in *Progressive Cattle*, May 2021.
- Bass, P.D. Big Beef. published in the *Line Rider*, January 2021.
- Bass, P.D. Meat industry resiliency. Article published in the *National Provisioner*, July, 2020.
- Jackson, D. Crafting Idaho Flavor. Interviewed as primary resource for the article published in the *Here we have Idaho*, April, 2020
- Bass, P.D. Tell me a story. Article published in the *National Provisioner*, October, 2019.
- Bass, P.D. The big cattle divide. Article Published in the *National Provisioner*, July, 2019.
- Colle, M. J. and P. D. Bass. University of Idaho – Higher Education Series. Article published in the *Independent Processor* magazine, February, 2019.
- Bass, P. D. Lamb meets demand for flavor intensity. Article Published in the *National Provisioner*, January, 2019.
- Bass, P.D. Want tender? Get out the (connective) tissues! Article Published in the *National Provisioner*, July, 2018
- Sweeter, W. Weather plays a key factor in dark cutters. Interviewed as a primary resource for the article published in the *Progressive Cattleman*. May, 2018
- Bass, P.D. Bone of contention. Article published in the *National Provisioner*, January, 2018
- Bass, P.D. Designing a ‘fab’ meat-fabrication room. Article published in the *National Provisioner*, June 2017
- Bass, P.D. Smoking Beef, beyond brisket. Article published in the *National Provisioner*, January, 2017
- Bass, P.D. A mortadella mentality. Article published in the *National Provisioner*, June, 2016
- Bass, P.D. A cured beef cut: that’s Italian. Article published in the *National Provisioner*, March, 2016
- Bass, P.D. The value of a little slice of brisket. Article published in the *National Provisioner*, December, 2015
- Bass, P.D. Beef cuts: what’s in a name. Article published in the *National Provisioner*, September, 2015
- Bass, P.D. Better with age. Article published in the *National Provisioner*, June, 2015
- Bass, P.D. Regionality brings out the best. Article published in the *National Provisioner*, March, 2015

Community Service: (non-academic unrelated to employment)

Deary Fire District Volunteer Firefighter, August 2018 - Present

Sterling Fire District Volunteer Firefighter, April 2014 – October 2017

Wayne County Fair Prince and Princess Selection Committee Member, 2010 – 2011

Wayne County FFA Public Speaking Judge, 2010 – 2013

Assistant Coach, Ferndale Freestyle Wrestling Club, 2000 – 2001