

# Curriculum Vitae – M. L. Day

## Personal Data

Michael L. Day, BS, MS, Ph.D.  
Kansas State University  
Department of Animal Sciences and Industry  
232A Weber Hall  
1424 Claflin Road  
Manhattan, KS, 66506  
Phone: 785-532-7624  
Cell: 740-627-1577  
Email: mlday@k-state.edu

## Degrees

- Jan 1980, University of Missouri, BS, Animal Husbandry
- Jan 1982, University of Nebraska, MS, Animal Science
- Jan 1985, University of Nebraska, PhD, Animal Science

## Positions

- 1980 - 1985, Graduate Research Assistant, Animal Sciences, University of Nebraska
- 1985 - 1991, Assistant Professor, Animal Sciences, The Ohio State University
- 1991 - 2000, Associate Professor, Animal Sciences, The Ohio State University
- 1996 - 1997, Visiting Research Scientist, Reproductive Physiology Group, Dairying Research Corporation, Hamilton, New Zealand
- 2000 to 2015, Professor, Animal Sciences, The Ohio State University
- 2012 to 2015, Graduate Faculty, OSU College of Veterinary Medicine
- **2015 to present, Professor Emeritus, Animal Sciences, The Ohio State University**
- 2015 to 2019, Professor and Head, Animal Science, University of Wyoming
- **2019 to present, Professor and Head, Animal Sciences and Industry, K-State Univ.**

## Awards/Honors

- 1999, Teaching Award, College of Food, Agricultural and Environmental Sciences, OSU
- 2000, Teaching Award of Merit, Gamma Sigma Delta, The Ohio State University
- 2001, Advising Award, College of Food, Agricultural and Environmental Sciences, OSU
- 2004, Research Award of Merit, Gamma Sigma Delta, The Ohio State University
- 2004, Honorary Uncle, OSU Saddle and Sirloin Club, The Ohio State University
- 2005, Epsilon Sigma Phi Team Teaching Award for Cow-Calf Schools, OSU
- 2015, ASAS Animal Physiology and Endocrinology Award
- 2018, Meritorious Service Award, OSU College of Food, Agricultural and Environmental Sciences Alumni Society

## Teaching

Primary teaching responsibilities at The Ohio State University were in Beef Cattle Production and Management, Introductory Animal Sciences and Physiology/Theriogenology. At the

## Curriculum Vitae – M. L. Day

University of Wyoming, I am co-teaching (for the 2<sup>nd</sup> time) “Topics and Issues in Animal Science”, a capstone intensive writing course for seniors.

### Doctoral Students Trained

- 2013 - 2016 Bo Harstine. The Ohio State University. Current Position: Select Sires Inc., Director of Research.
- 2012 - 2014 Fernanda Abreu. The Ohio State University. Most recent position: Co-Director of a livestock analytics company in Brazil.
- 2012 - 2014 Leandro Cruppe. The Ohio State University. Current Position: Director of Development and Research, Select Sires do Brasil.
- 2010 - 2013 Matthew Utt. The Ohio State University. Relationships between In Vivo and In Vitro heterospermic ranking, embryo development, and sperm characteristics of Holstein and Jersey bulls. Current Position: Select Sires Inc., Director of Data Innovation.
- 2007 - 2011 Martin Maquivar. The Ohio State University. Nutritional regulation of precocious puberty in heifers. Current Position: Clinical Assistant Professor, Washington State University.
- 2004 - 2009 Martin Mussard. The Ohio State University. Influence of the size and age of the ovulatory follicle on fertility in beef cattle. Current Position: Research Herd Manager, OSU Beef and Sheep Center.
- 2004 - 2007 Allen Bridges. The Ohio State University. Impact of preovulatory estradiol concentrations on mechanisms affecting fertility in cattle. Current Position: Elanco Animal Health, Research Scientist, Global Regulatory New Product Development
- 2002 - 2005 Chad Gasser. The Ohio State University. Ovarian and endocrine dynamics associated with sexual maturation in heifers and the influence of diet, weaning age, and other factors during early reproductive development. Current Position: Associate Professor, Southern Utah University.
- 1999 - 2003 Christopher Burke. The Ohio State University. Regulation of ovarian follicular development with estradiol in cattle. Current Position: Senior Research Scientist, DairyNZ, Hamilton, NZ.
- 1992 - 1996 Leslie Harold Anderson. The Ohio State University. Maturation of hypothalamic centers associated with the onset of puberty in heifers. Current Position: Professor, University of Kentucky.

### Masters Students Trained

- 2011 - 2013 Bo Harstine. The Ohio State University. The effects of nutritional and endocrine manipulation on testicular development, attainment of puberty, and sperm production of bulls. Pursued a Ph.D in my program at OSU.

## Curriculum Vitae – M. L. Day

- 2009 - 2011      Fernanda Abreu. The Ohio State University. The effect of follicle age on fertility in beef cattle. Pursued a Ph.D in my program at OSU.
- 2009 - 2011      Leandro Cruppe. The Ohio State University. The effect of preovulatory concentration of estradiol and length of proestrus on fertility in beef cattle. Pursued a Ph.D in my program at OSU.
- 2008 - 2010      Lucas Souto. The Ohio State University. The Effect of Length of the Preovulatory Period on Mechanisms Regulating Embryonic Survival in Beef Cattle. Current Position: Vetoquinol Global, Group Product Manager, Paris, France.
- 2005 - 2007      Lucas Helser. The Ohio State University. Factors responsible for the occurrence of double ovulations and development of a system to induce double ovulations in beef cattle. Current Position: Select Sires Inc., Quality control/quality assurance coordinator.
- 1998 - 2000      Valerie Bogacz. The Ohio State University. Manipulation of bovine follicular dynamics with estradiol: Influence of estradiol dose and stage of the estrous cycle on follicular turnover and development.
- 1994 - 1996      Chad McDowell. The Ohio State University. Estrous synchronization of cattle through regulation of persistent ovarian follicles. Current Position: Manager of McDowell Farms, Ohio.
- 1990 - 1992      Lisa Kwiatkowski. The Ohio State University. Estrogen effects on characteristics of the postpartum period in the cow. Current Position: USDA-FSIS, Consumer Safety Inspector.
- 1988 - 1990      Scott Kurz. The Ohio State University. Effect of energy on the endocrine mechanisms of puberty in beef heifers. Current Position: Physiology Laboratory Manager, University of Nebraska, Lincoln.
- 1987 - 1990      Yunfu Hu. The Ohio State University. Factors regulating function of short-lived corpora lutea in cattle and sheep. Current Position: US FDA, Deputy Division Director, Washington D.C.
- 1987 - 1989      Michael Dyer. The Ohio State University. Neuroendocrine mechanisms of estradiol in the regulation of puberty in beef heifers. Current Position: Veterinarian, Private Practices, Ohio and Kentucky.

### Research Training (since 2006)

- 2014      Adnan Rodrigues. Visiting Scholar, Ph.D. Student, UNESP, SP, BR
- 2012      Rafael Cipriano. Visiting Scholar, PhD student, USP, SP, BR
- 2011 - 2012      Marcos Biehl. Visiting Scholar, Ph.D. Student, USP, SP, BR
- 2012      Amanda Lemes. Visiting Scholar, MS Student, USP, SP, BR
- 2011      Adnan Rodrigues. Visiting Scholar, MS Student, UNESP, SP, BR
- 2014      Carla Ceppi, Visiting Scholar, BS Student, U. Jaguariuna, MG, BR
- 2013      Renata Pignatta. Visiting Scholar, BS Student, USP, SP, BR

## Curriculum Vitae – M. L. Day

2012	Pedro Vilela. Visiting Scholar, Veterinary student, UFMS, MS, BR
2012	Marco Aurelio Borges. Visiting Scholar, BS student, UNESP, SP, BR
2012	Victor Fonseca. Visiting Scholar, Veterinary student, UNESP, SP, BR
2011	Janaina Dolci Polonia. Visiting Scholar, BS student, UNESP, SP, BR
2010	Gabriela Kimerling. Visiting Scholar, BS student, UNESP, SP, BR
2009	Vagner Guererio. Visiting Scholar, Vet student, UNESP, SP, BR
2008	Leandro Cruppe. Visiting Scholar, Vet student, UNESP, SP, BR
2007	Lucas Souto. Visiting Scholar, Veterinary student, UNESP, SP, BR

### Peer-Reviewed Journal Articles (since 2010, 99 total)

1. Abreu FM; Coutinho da Silva MA; Cruppe LH; Mussard ML; Bridges GA; Harstine BR; Smith GW; Geary TW; Day ML. “Role of progesterone concentrations during early follicular development in beef cattle: I. Characteristics of LH secretion and oocyte quality.” *Anim. Reprod. Sci.* 196:59-68.2018.
2. Abreu FM; Geary TW; Coutinho da Silva MA; Cruppe LH; Mussard ML; Madsen CA; Martins T; Bridges GA; Harstine BR; Day ML. “Role of progesterone concentrations during early follicular development in beef cattle: II. Ovulatory follicle growth and pregnancy rates.” *Anim. Reprod. Sci.* 196:69-76.2018.
3. Harstine BR; Cruppe LH; Abreu FM; Rodrigues AD; Premanandan C; DeJarnette JM; Day ML. “Impact of a timed-release FSH treatment from 2 to 6 months of age in bulls I: Endocrine and testicular development of beef bulls.” *Theriogenology* 105:142 - 149. 2018.
4. Harstine BR; Cruppe LH; Abreu FM; Rodrigues AD; DeJarnette JM; Day ML. “Impact of a timed-release FSH treatment from 2 to 6 months of age in bulls II: Endocrinology, puberty attainment, and mature sperm production in Holstein bulls.” *Theriogenology* 105:142 - 149. 2018.
5. Harstine BR; Cruppe LH; Abreu FM; Utt MD; Cipriano RS; Lemes A; Premanandan C; DeJarnette JM; Day ML. “Impact of a timed-release follicle-stimulating hormone treatment from one to three months of age on endocrine and testicular development of prepubertal bulls.” *J. Anim. Sci.* 95:1669 - 1679. 2017.
6. Ferraz Junior MV; Pires AV; Biehl MV; Santos MH; Barroso JP; Gonçalves JR; Sartori R; Day ML. “Comparison of two timed artificial insemination system schemes to synchronize estrus and ovulation in Nellore cattle.” *Theriogenology* 86:1939-1943. 2016.
7. Ferraz Junior MV; Pires AV; Biehl MV; Santos MH; Polizel DM; Nepomuceno DD; Sartori R; Barreto Filho JB; Gonçalves JR; Day ML. “Luteolysis in *Bos indicus* cows on Days 5 and 7 of estrous cycle with varying doses of PGF<sub>2</sub>α.” *Theriogenology* 86:1268 - 1274. 2016.

## Curriculum Vitae – M. L. Day

8. Harstine BR; Maquivar M; Helser LA; Utt MD; Premanandan C; DeJarnette JM; Day ML, "Effects of dietary energy on sexual maturation and sperm production in Holstein bulls". *J. Anim. Sci.* 93:2759 - 2766. 2015.
9. Day ML, "State of the art of GnRH-based timed AI in beef cattle". *Anim. Reprod.* 12:473-478. 2014.
10. Cruppe LH; Day ML; Abreu FM; Kruse S; Lake SL; Biehl MV; Cipriano RS; Mussard ML; Bridges GA, "The requirement of GnRH at the beginning of the five-day CO-Synch + controlled internal drug release protocol in beef heifers". *J. Anim. Sci.* 92:4198-4203. 2014.
11. Rodrigues ADP; Peres RFG; Lemes AP; Martins T; Pereira MHC; Carvalho, ER; Day ML; Vasconcelos JLM, "Effect of interval from induction of puberty to initiation of a timed AI protocol on pregnancy rate in Nellore heifers". *Theriogenology* 82:760-766. 2014.
12. Bas S; Maquivar MG; Coutinho da Silva MA; Day ML; Daglio MC; Harguindeguy S; Titler M; Schuenemann GM, "Effect of intrauterine administration of gonadotropin releasing hormone with glycerol on serum LH concentrations in lactating dairy cows". *Anim. Reprod. Sci.* 145:15-22. 2014.
13. Abreu FM; Geary TW; Cruppe LH; Madsen CA; Jinks EM; Pohler KG; Vasconcelos JLM; Day ML, "The effect of follicle age on pregnancy rate in beef cows". *J. Anim. Sci.* 92:1015-1021. 2014.
14. Abreu FM; Cruppe LH; Maquivar M; Utt MD; Madsen CA; Vasconcelos JLM; Day ML, Geary YW, "The effect of follicle age on conception rate in beef heifers". *J. Anim. Sci.* 92:1022-1028. 2014.
15. Bridges GA; Mussard ML; Helser LA; Day ML, "Comparison of follicular dynamics and hormone concentrations between the 7-day and 5-day CO-Synch + CIDR program in primiparous beef cows". *Theriogenology* 81:632-638. 2014.
16. Martins T, Peres RF; Rodrigues AD; Pohler KG; Pereira MH; Day ML; Vasconcelos JLM, "Effect of progesterone concentrations, follicle diameter, timing of artificial insemination, and ovulatory stimulus on pregnancy rate to synchronized artificial insemination in postpubertal Nellore heifers". *Theriogenology* 81:446-453. 2014.
17. Day ML and Nogueira GP, "Management of age at puberty in beef heifers to optimize efficiency of beef production". *Animal Frontiers.* Vol. 3, 6-11. 2013.
18. Bridges GA; Day ML; Geary TW; Cruppe LH, "TRIENNIAL REPRODUCTION SYMPOSIUM: Deficiencies in the uterine environment and failure to support embryonic development". *J. Anim. Sci.* 91:3002-3013. 2013.
19. Geary TW; Smith MF; MacNeil MD; Day ML; Bridges GA; Perry GA; Abreu FM; Atkins JA; Pohler KG; Jinks EM; Madsen CA, "TRIENNIAL REPRODUCTION SYMPOSIUM: Influence of follicular characteristics at ovulation on early embryonic survival". *J. Anim. Sci.* 91:3014-3021. 2013.

## Curriculum Vitae – M. L. Day

20. Utt MD; Day ML, "TRIENNIAL REPRODUCTION SYMPOSIUM: The obstacle course to successful establishment of pregnancy in domestic livestock species". *J. Anim. Sci.* 91:2993-2999. 2013.
21. Rodrigues ADP; Peres RFG; Lemes AP; Martins T; Peres MHC; Day ML; Vasconcelos JLM, "Progesterone-based strategies to induce ovulation in prepubertal Nelore heifers". *Theriogenology* 79:135-141. 2013.
22. Bas S; Pinto CG; Day ML; Schuenemann GM, "Effect of intrauterine administration of gonadotropin releasing hormone on serum LH concentrations in lactating dairy cows". *Theriogenology* 78:1390-1397. 2012.
23. Bridges GA; Ahola JK; Brauner C; Cruppe LH; Currin JC; Day ML; GUNN PJ; Jaeger JR; Lake SL; Lamb GC; Marquezini GHL; Peel RK; Radunz AE; Stevenson JS; Whittier WD "Determination of the appropriate delivery of prostaglandin F-2 alpha in the five-day CO-Synch plus controlled intravaginal drug release protocol in suckled beef cows". *J. Anim. Sci.* 90:4814-4822. 2012.
24. Bridges GA; Mussard ML; Pate JL; Ott TL; Hansen TR; Day ML, "Impact of preovulatory estradiol concentrations on conceptus development and uterine gene expression". *Anim. Reprod. Sci.* 133:16-26. 2012.
25. Claro Junior I; Sa Filho OG; Peres RFG; Aono FHS; Day ML; Vasconcelos JLM, "Reproductive performance of prepubertal *Bos indicus* heifers after progesterone-based treatments". *Theriogenology* 74:903-911. 2010.
26. Radunz AE; Fluharty FL; Day ML; Zerby HN; Loerch SC, "Parturition dietary energy source fed to beef cows: I. Effects on pre- and postpartum cow performance". *J. Anim. Sci.* 88:2717-2728. 2010.
27. Bridges GA; Mussard ML; Burke CR; Day ML, "Influence of the length of proestrus on fertility and endocrine function in female cattle". *Anim. Reprod. Sci.* 117:208-215. 2010.
28. Day ML; Mussard ML; Bridges GA; Burke CR, "Controlling the dominant follicle in beef cattle to improve estrous synchronization and early embryonic development". *Soc. Reprod. Fertil. Suppl.* 67:405-420. 2010.
29. Knox RV; Day ML; Lewis GS; Lucy MC; Vonnahme KA, "Triennial Reproduction Symposium. Challenges and opportunities facing livestock reproduction in the 21st century". *J. Anim. Sci.* 88:E193-E194. 2010.

### **Papers in Proceedings (since 2010, 33 since 2000)**

1. Recent advances in the use of the 5-day Cosynch program in beef cattle. Day ML, Bridges GA. In: *Proceedings of the 11th IRAC International Symposium on Animal Reproduction.* (2015):129 – 142.

## Curriculum Vitae – M. L. Day

2. Nutritional and hormonal manipulation of puberty in bulls. Harstine BR, Day ML. In: Proceedings of the 11th IRAC International Symposium on Animal Reproduction. (2015):257 - 282.
3. Nutritional Effects on Beef Heifer Development, Puberty and Subsequent Reproduction. Day ML. In: Proceedings of the 26th Annual Florida Ruminant Nutrition Symposium. (2015):69-77.
4. Day ML; Maquivar M. "Puberty in Heifers: Nutrition and Endocrinology" In: Proceedings of the 2014 Joint Convention of CETA/ACTE and AETA. (2014):50-56.
5. Bridges GA; Day ML. "Applications of physiological principles to optimize timed AI pregnancy rates with the 5-d CO-Synch + CIDR protocol in cattle" In: Clinical Theriogenology (2013) 5:244-252.
6. Bridges GA; Day ML. "Management factors that affect the success of AI programs in beef cattle" In: Clinical Theriogenology. (2013) 5:263-269.
7. Day ML; Bridges GA. "Cattle physiology and the CO-Synch + CIDR synchronization program" In: Clinical Theriogenology (2013) 5:237-243.
8. Day ML; Carvalho MP; Martins RAC; Rodrigues ADP. "Should Nelore or Nelore crossbred heifers calve at 2 years of age or later?" In: Proceedings of the XVII Course on New Approaches to Production and Reproduction in Cattle. (2013):63-78.
9. Utt MD; Day ML. "Fertility of heterospermic semen in vivo and in vitro" In: Proceedings of the XVII Course on New Approaches to Production and Reproduction in Cattle. (2013):79-99.
10. Cruppe LH; Day ML. "Optimizing timed AI pregnancy rate with the 5-d CO-Synch + CIDR program." In: Proceedings of the 2012 Joint Convention of CETA/ACTE and AETA. (2012):3-19.
11. Cruppe LH; Day ML. "Optimizing timed AI pregnancy rate with the 5-d CO-Synch + CIDR programme." In: Proceedings of the 2012 Bayer New Zealand Reproduction Road Show. (2012):3-15.
12. Cruppe LH; Day ML. "Maximizing timed AI pregnancy rates with the 5 day CO-Synch + CIDR protocol in beef cattle" In: 9th IRAC International Symposium on Animal Reproduction. (2011):193-222.
13. Maquivar M; Day ML. "Strategies for nutritional and hormonal induction of puberty in beef heifers and the impact on fertility" In: 9th IRAC International Symposium on Animal Reproduction. (2011):43-70.
14. Cruppe LH; Day ML. "Estrous synchronization protocols to optimize follicular dynamics and hormonal concentration in Brazil and the USA" In: Proceedings of the XV Course on New Approaches to Production and Reproduction in Cattle. (2011):87-97.

## Curriculum Vitae – M. L. Day

15. Maquivar M; Day ML. "Nutritional and hormonal induction of puberty in heifers and the impact on fertility" In: Proceedings of the XV Course on New Approaches to Production and Reproduction in Cattle. (2011):43-70.
16. Abreu FM; Cruppe LH; Roberts CA; Jinks EM; Pohler KG; Day ML; Geary TW. "The effect of follicle age on pregnancy rate in beef cows" In: Proceedings, Western Section, American Society of Animal Science. (2011) 62:58-61.
17. Day ML; Mussard ML; Bridges GA; Burke CR. "Controlling the dominant follicle in beef cattle to improve estrous synchronization and early embryonic development" In: Proceedings of the 8th International Symposium on Reproduction in Domestic Ruminants. (2010) 67:405-419.

### Books

1. Pasha A. Lyvers Peffer and Michael L. Day, "Animal Sciences". Columbus: Kendall Hunt, 2009; 2014.
2. Day, M. L. and Geary, T. W., "Handbook of Estrous Synchronization". Columbus: Western Region Publication No. 014, 2005.

### Chapters in Edited Books

1. Day M.L. and A.V. Pires, "The physiology of anestrus and hormonal methods to induce cyclicity in bovine females." In "Beef Cattle Production (Bovinocultura De Corte)". Edited by: A. V. Pires. Piracicaba: FEALQ. 2010.
2. Bridges G.A., M.L. Day and A.V. Pires, "Physiological aspects of reproduction in bovine females and optimizing the synchronization of estrus and ovulation." In "Beef Cattle Production (Bovinocultura De Corte)". Edited by: A. V. Pires. Piracicaba: FEALQ. 667-682.
3. Day M.L., C.R. Burke and A.V. Pires, "The use of exogenous estradiol to coordinate follicular growth, estrus and ovulation." In "Beef Cattle Production (Bovinocultura De Corte)". Edited by: A. V. Pires. Piracicaba: FEALQ. 2010.
4. Day, M.L., C.L. Gasser, D.E. Grum and A.V. Pires., "Factors affecting age at puberty in beef heifers." In "Beef Cattle Production (Bovinocultura De Corte)". Edited by: A. V. Pires. Piracicaba: FEALQ. 637-648. 2010.
5. Day, M. L. and C. R. Burke., "Management of follicular growth with progesterone and estradiol within progestin – based estrous synchrony systems." In "Factors Affecting Calf Crop, Biotechnology of Reproduction". Edited by: M. J. Fields, R. S. Sand and J. V. Yelich. New York: CRC Press. 2002.

**Meeting Abstracts (approximately 160 total, not listed)**

**Invited Presentations (2000 to present, local and regional extension presentations not listed)**



## Curriculum Vitae – M. L. Day

### *National*

1. "Beef Industry Perspectives." Presented at 2013 Select Sires National Sales Conference. Columbus, OH (2013)
2. "Should Nelore or Nelore crossbred heifers calve at 2 years of age or later?" Presented at 17th Annual Roy A. Wallace Memorial Symposium on Bovine Reproduction. Staunton, VA (2013)
3. "Cattle physiology and the CO-Synch + CIDR synchronization program." Presented at Society for Theriogenology Annual Conference and Symposia. Lexington, KY (2013)
4. "Management factors that affect the success of AI programs in beef cattle." Presented at Society for Theriogenology Annual Conference and Symposia. Lexington, KY (2013)
5. "The impact of age of the ovulatory follicle on fertility in beef heifers and cows." Presented at the 15th Annual Roy A. Wallace Memorial Symposium on Bovine Reproduction. Columbus, OH (2011)
6. "The 5 d CO-Synch + CIDR program, Fertility and Convenience." Presented at 13th Annual Select Sires Think Tank. Columbus, OH (2009)
7. "Proestrus, estradiol and fertility in cattle." Presented at Distinguished Lecturer Series - University of Florida Graduate Student Association. Gainesville, FL (2009)
8. "The estrous cycle and hormones for synchronization." Presented at the Ohio Dairy Certification Program. Columbus, OH (2009)
9. "The 5 d CO-Synch+CIDR program: What is the limit for fertility and convenience?" Presented at 13th Annual Select Sires Think Tank. Columbus, OH (2008)
10. "The 5-d Select Synch + CIDR or CO-Synch + CIDR synchronization program in postpartum beef cows." Presented at the 12th Annual Select Sires Think Tank. Columbus, OH (2007)
11. "The 5-d CO-Synch + CIDR program in postpartum beef cows and yearling heifers." Presented at Select Sires National Sales Conference. Columbus, OH (2007)
12. "Reproductive performance with a 5-d CO-Synch + CIDR synchronization program." Presented at 11th Annual Select Sires Think Tank. Denver, CO (2006)
13. "Reproductive performance with a 5-d Select Synch or a CO-Synch synchronization program." Presented at 10th Annual Select Sires Think Tank. Columbus, OH (2005)
14. "Follicular maturity and fertility in cattle." Presented to the Reproductive Biology Program, University of Missouri. Columbia, MO (2005)
15. "Influence of follicle maturity on fertility in cattle." Presented at 9th Annual Select Sires Think Tank. Columbus, OH (2004)

## Curriculum Vitae – M. L. Day

16. "Follicular development in prepubertal heifers." Presented at Reproduction Symposium, Midwest Meeting of the American Society of Animal Science. Des Moines, IA (2004)
17. "Estrous Synchronization in Heifers." Presented at the Meeting of the Society for Theriogenology/ American Association of Bovine Practitioners. Columbus, Ohio, (2003)
18. "Influence of follicular maturity on fertility of cattle for AI and embryo transfer." Presented at Pre-conference Workshop sponsored by AABP, Advanced Reproduction. Columbus, OH (2003)
19. "Ovarian follicle maturity at induced ovulation influences fertility in cattle." Presented at Meeting of the Society for Theriogenology/ American Association of Bovine Practitioners. Columbus, OH (2003)
20. "Resetting the follicle wave in cattle." Presented at Pre-conference Workshop sponsored by AABP, Advanced Reproduction. Columbus, OH (2003)
21. "When does ovulation occur with synchronization protocols?" Presented at Pre-conference Workshop sponsored by AABP, Advanced Reproduction. Columbus, OH (2003)
22. "Use of progesterone to induce and synchronize estrus: Application of the CIDR." Presented at Ovagenix Information Day, Texas A&M University. College Station, TX (2003)
23. "Current and future research in our reproductive physiology program." Presented at Pfizer Animal Health, Reproductive Leaders Meeting. Scottsdale, AZ (2003)
24. "Strategic use of the CIDR with a GnRH-PGF Synchrony System." Presented at 7th Annual Select Sires Think Tank. Columbus, OH (2002)
25. "Follicular Control and Estrous Synchronization Research at The Ohio State University." Presented at 6th Annual Select Sires Think Tank. Columbus, OH (2001)
26. "The Estrous Cycle." Presented at 2001 Beef Improvement Federation Meetings. San Antonio, TX (2001)
27. "Use of Progesterone to Induce and Synchronize Estrus; Application of the CIDR." Presented at Beef Improvement Federation Meetings. San Antonio, TX (2001)
28. "Early Weaning, Puberty and Cow Reproduction." Presented at Midwest ASAS Meeting Extension Symposium. Des Moines, IA (2001)
29. "Estrous Synchronization Research at The Ohio State University." Presented at 5th Annual Select Sires Think Tank. Columbus, OH (2000)
30. "The Estrous Cycle." Presented at 49th Annual Florida Cattlemen's Beef Cattle Short Course. Gainesville, FL (2000)

## Curriculum Vitae – M. L. Day

### *International*

1. “Application and economics of precocious pregnancy in Nelore influenced cattle”. Presented at The XX Course on New Approaches to Production and Reproduction in Cattle. Uberlandia, BR (2016)
2. “Variation in fertility of semen for timed AI”. Presented at The XX Course on New Approaches to Production and Reproduction in Cattle. Uberlandia, BR (2016)
3. “State of the art of GnRH-based timed AI in beef cattle”. Presented at the 29th Annual Meeting of the Brazilian Embryo Technology Society (SBTE); Gramado, RS, Brazil (2015)
4. “Recent advances in the use of the 5-day Cosynch program in beef cattle”. Presented at the 11th IRAC International Symposium on Animal Reproduction. Cordoba, Argentina (2015)
5. “Nutritional and hormonal manipulation of puberty in bulls”. Presented at the 11th IRAC International Symposium on Animal Reproduction. Cordoba, Argentina (2015)
6. “Nutritional Effects on Beef Heifer Development, Puberty and Subsequent Reproduction”. Presented at the 26th Annual Florida Ruminant Nutrition Symposium. Gainesville FL (2015)
7. “Puberty and reproductive performance in heifers” Presented at the 2014 Joint Convention of CETA/ACTE and AETA. Madison, WI (2014)
8. "Global perspectives on beef production: Where do we go from here?" Presented at 1st International Meeting on Animal Reproduction. Fazenda Esplanada, BR (2013)
9. "Effects of follicle age on fertility in beef cattle." Presented at UNESP Graduate Course Series in Reproduction. Botucatu, BR (2013; 3-hour course to graduate students)
10. "Fertility of heterospermic semen in vivo and in vitro." Presented at The XVII Course on New Approaches to Production and Reproduction in Cattle. Uberlandia, BR (2013)
11. "Optimizing puberty in Nelore heifers with nutritional and hormonal intervention." Presented at UNESP Graduate Course Series in Reproduction. Botucatu, BR (2013; 6-hour course to graduate students)
12. "Should Nelore or Nelore crossbred heifers calve at 2 years of age or later?" Presented at The XVII Course on New Approaches to Production and Reproduction in Cattle. Uberlandia, BR (2013)
13. "Optimizing timed AI pregnancy rate with the 5-d CO-Synch + CIDR program." Presented at 2012 Joint Convention of CETA/ACTE and AETA. Winnipeg, CA (2012)

## Curriculum Vitae – M. L. Day

14. "Optimizing timed AI pregnancy rate with the 5-d CO-Synch + CIDR programme."  
Presented at 2012 Bayer New Zealand Reproduction Road Show. New Zealand. (2012; 8 presentations at 8 locations throughout New Zealand to veterinarians and cattle producers)
15. "AI, Timed-AI, Proestrus, Follicular Development, Embryonic Survival - Maximizing Beef Calf Production." Presented at UNESP Graduate Course Series in Reproduction. Botucatu, BR (2012; 6-hour course to graduate students)
16. "Predicting Bull Fertility: What is each bulls story?" Presented at UNESP Graduate Course Series in Reproduction. Botucatu, BR (2012; 6-hour course to graduate students from various Brazilian Universities)
17. "Puberty in Beef Heifers." Presented at UNESP Graduate Course Series in Reproduction. Botucatu, BR (2012; 8-hour course to graduate students)
18. "Maximizing Timed AI Pregnancy Rates with the 5 day CO-Synch + CIDR Program." Presented at 9th IRAC International Symposium on Animal Reproduction. Cordoba, AR (2011)
19. "Strategies for Nutritional and Hormonal Induction of Puberty in Heifers and the Impact on Fertility." Presented at 9th IRAC International Symposium on Animal Reproduction. Cordoba, AR (2011)
20. "Estrous synchronization protocols to optimize follicular dynamics and hormonal concentration in Brazil and the USA." Presented at XV Course on New Approaches to Production and Reproduction in Cattle. Uberlandia, BR (2011)
21. "Nutritional and hormonal induction of puberty in heifers and the impact on fertility." Presented at XV Course on New Approaches to Production and Reproduction in Cattle. Uberlandia, BR (2011)
22. "Controlling the dominant follicle in beef cattle to improve estrous synchronization and early embryonic development." Presented at 8th International Ruminant Reproduction Symposium. Anchorage, AK (2010)
23. "Development of the 5 d CO-Synch+CIDR Program. Enhanced Fertility and Convenience?" Presented at ESALQ Reproductive Biology Group. Piracicaba, BR (2010)
24. "Nutritional control of precocious puberty in beef heifers." Presented at XIII Course on New Approaches to Production and Reproduction in Cattle. Uberlandia, BR (2009)
25. "The effect of enhanced stimulation of preovulatory follicles on pregnancy rate to timed AI in beef cattle." Presented at XIII Course on New Approaches to Production and Reproduction in Cattle. Uberlandia, BR (2009)
26. "Actions of exogenous estradiol to coordinate follicular growth, estrus and ovulation." Presented at X Course on New Approaches to Production and Reproduction in Cattle. Uberlandia, BR (2006)

## Curriculum Vitae – M. L. Day

27. "Determinants of age at puberty in heifers." Presented at X Course on New Approaches to Production and Reproduction in Cattle. Uberlandia, BR (2006)
28. "Impact of reproductive steroid hormone concentrations on fertility in cattle." Presented at X Course on New Approaches to Production and Reproduction in Cattle. Uberlandia, BR (2006)
29. "'Young follicle ... mature follicle: What does it matter?'" Presented at Dexcel Ltd Seminar series. Hamilton, New Zealand. (2006)
30. "Effects of strategies to synchronize ovulation on follicular development and fertility." Presented at IX Course on New Approaches to Production and Reproduction in Cattle. Uberlandia, BR (2005)
31. "Estrus synchronization protocols frequently utilized on heifers in the USA." Presented at IX Course on New Approaches to Production and Reproduction in Cattle. Uberlandia, BR (2005)
32. "Follicular maturity and fertility in cattle." Presented to the Reproductive Physiology Program, University of Saskatchewan. Saskatoon, CA (2005)
33. "Understanding the physiology of anestrus to determine hormone therapies to induce onset of estrous cycles." Presented at IX Course on New Approaches to Production and Reproduction in Cattle. Uberlandia, BR (2005)
34. "The use of hormonal treatments to improve the reproductive performance of anoestrous beef cattle." Presented at International Congress on Animal Reproduction. Porto Seguro, BR (2004)
35. "Estrous Synchronization Systems in Cattle: Influence of Nutrition and Body Condition." Presented at Japan Cattleman's Association Second Annual Beef Cattle Shortcourse. Obihiro, JP (2001)
36. "Use of Estrous Control to Enhance Reproductive Performance in Dairy Herds." Presented at Dairy Producers and AI Technicians in Eastern Hokkaido. Kitami, JP (2001)
37. "Estrous Synchronization and Timed Insemination in Beef Cattle." Presented at 2000 Japanese Cattlemen's Association Annual Meeting. Shimane, JP (2000)

### **Research Funding (~ \$1.5 million; 2000 to present)**

#### ***Funded Research as Principal Investigator***

1. 04/2013 - 04/2014. The optimal program for timed-AI with the 5-d CO-Synch + CIDR program in yearling beef heifers. Select Sires, Inc and Pfizer Animal Health. (44,000, Total Award). PI: Day, ML; Co-PI: Bridges, GA

## Curriculum Vitae – M. L. Day

2. 04/2012 - 04/2013. Necessity of the initial GnRH in the 5-d CO-Synch + CIDR program in heifers. Select Sires, Inc and Pfizer Animal Health. (18,300, Total Award). PI: Day, ML; Co-PI: Bridges, GA
3. 07/2007 - 06/2012. Impact of reproductive steroid hormone concentrations on uterine mechanisms regulating embryonic survival in cattle. USDA-NRICGP. (330,000, Total Award) PI: Day, ML
4. 01/2010 - 01/2011. Mechanisms of puberty in Holstein bulls. Select Sires, Inc. (15,000, Total Award) PI: Day, ML; Co-I: Helser, LH, DeJarnette, M
5. 04/2009 - 04/2010. Use of a double dose of PGF in the 5 d CO-Synch+CIDR program. Select Sires, Inc. and Pfizer Animal Health (32,413, Total Award) PI: Day, ML; Co-I: Bridges, GA
6. 04/2008 - 04/2009. The 5 d CO-Synch+CIDR program: What is the limit for fertility and convenience? Select Sires, COBA Select Sires, IVX Animal Health and Pfizer Animal Health (30,003, Total Award) PI: Day, ML
7. 04/2007 - 04/2008. Influence of prostaglandin F<sub>2</sub> $\alpha$  treatment on reproductive performance with the 5-d CO-Synch + CIDR program in female cattle. Select Sires, IVX Animal Health and Pfizer Animal Health (35,672, Total Award) PI: Day, ML
8. 05/2003 - 04/2007. Twin births in cattle: Development of systems to induce twinning and factors responsible for the occurrence of twin births in cattle. OARDC SEEDS Competitive Grants Program, Industry Matching Program with Kamiasahi Feedlot, Ltd., Obihiro, Japan. (71,616, Total Award) PI: Day, ML
9. 04/2006 - 04/2007. Influence of a 5- day CO-Synch + CIDR synchronization protocol on reproductive performance in postpartum cows and heifers. Select Sires, Phoenix Scientific and Pfizer Animal Health (36,840, Total Award) PI: Day, ML; Co-I: Hall, J and Whittier, D
10. 06/2006 - 05/2007. Impact of long-term genetic selection for age at puberty on postpartum reproductive physiology in cows. Beef CRC, Australia (32,470, Total Award) PI: Day, ML; Co-I: Morris, CR and D'Occhio, M. J.
11. 04/2005 - 04/2006. Determining if luteolysis and reproductive performance are influenced by time of PGF<sub>2</sub> $\alpha$  and/or progestin withdrawal in postpartum beef cows receiving a Select Synch or a CO-Synch synchronization program. Select Sires, Phoenix Scientific and Pfizer Animal Health (27,000, Total Award) PI: Day, ML
12. 09/2000 - 08/2005. Early maturation of the endocrine axis in heifers. USDA-NRICGP. (200,000, Total Award) PI: Day, ML, Kinder, JE
13. 04/2004 - 04/2005. Influence of timing of luteal regression on fertility of cattle synchronized with GnRH, CIDR and prostaglandin. Select Sires, Phoenix Scientific and Pfizer Animal Health (25,000, Total Award) PI: Day, ML

## Curriculum Vitae – M. L. Day

14. 04/2003 - 04/2004. Efficacy of estrous control programs utilizing the CIDR. Pharmacia Animal Health, Intervet and Select Sires (20,000, Total Award) PI: Day, ML
15. 01/2000 - 01/2003. Comparison of fat deposition pattern, feedlot performance and carcass characteristics of Wagyu and Angus cattle. Manno Chikusan Co. Ltd, Osaka, Japan (15,000, Total Award) PI: Day, ML; Co-I: Zerby, H, Fluharty, F.F., Loerch, S.C.
16. 04/2002 - 04/2003. Influence of follicular maturity at ovulation, addition of a progestin to the Cosynch program, and combination of 72 h calf – removal with the Short – term MGA-Select protocol on fertility in beef cattle. Select Sires, Intervet and Pharmacia Animal Health (25,000, Total Award) PI: Day, ML; Co-I: Borger, M, Silveira, F
17. 03/1999 - 02/2002. Effects of estradiol on the interactions of estrus, follicular development and ovulation in cattle. OARDC Competitive Grants Program, International Collaboration (20,000, Total Award) PI: Day, ML
18. 03/2001 - 03/2002. Synchronizing follicular growth, estrus and ovulation through management of persistent follicles in beef heifers and cows. Select Sires, DEC-InterAg and Pharmacia and Upjohn (15,000, Total Award) PI: Day, ML
19. 04/2000 - 04/2001. Influence of semen extender on pregnancy rate, progestins on follicular growth and ovulation and MGA/bull exposure on estrous synchronization in beef cows and heifers. Select Sires and Pharmacia and Upjohn (18,000, Total Award) PI: Day, ML
20. 06/1994 – 06/1999. Persistent ovarian follicles: Role of progesterone and LH in cows. USDA-NRICGP (146,000, OSU Award) PI: Kinder JE; Co-PI: Day, ML

### ***Funded Research as Co-Investigator***

1. 10/2013-11/2015. The effectiveness and safety of Fertagyl injection for use with a prostaglandin F2a to synchronize estrous to allow for fixed-time artificial insemination in lactating dairy cows compared to a saline control. Merck & Co Inc. (114,872, Total Award) PI: Hogan, JS; Co-I: Day ML
2. 04/2010 - 04/2011. Efficacy of the Co-PGF treatment with the 5 d CO-Synch + CIDR program. Select Sires, Pfizer Animal Health. (18,494, Total Award) PI: Bridges, GA; Co-I: Day ML

### ***Funded Training Grants***

1. 01/2010 - 12/2016. The OSU Select Sires C. E. Marshall Graduate Associateship Program. Select Sires Inc. (180,000 stipend support; ~50,000 research support) PI: Day, ML
2. 03/2013 - 04/2014. Enhancing the partnership between OSU and UNESP-Brazil through scientific exchange aimed at improving the reproductive efficiency of cattle. OSU Global Gateway Research Seed Grants (7,000, travel award) PI: Day ML, da Silva MC, Abreu FM

## Curriculum Vitae – M. L. Day

3. 04/2013 – 03/2014. Assessment of Angus bull fertility in the Brazilian beef cattle system. Global Gateway Research Abroad Grant (1,000, travel award) PI: Harstine BR, Day ML
4. 2009-2011. Evaluating the role of estradiol during the preovulatory period on fertility in beef cattle." USDA-ARS. (\$27,000, stipend support). PI: Day ML: Geary TW

### Service to Professional Societies

#### *Committee Leadership and Membership*

2010 - 2012	<b>Chair.</b> Triennial Reproduction Symposium Committee, American Society of Animal Sciences
2004 - 2012	Triennial Reproduction Symposium Committee, American Society of Animal Sciences
2004 - 2012	American Society of Animal Science, L. E. Casida Award Committee
2004 - 2007	Society for the Study of Reproduction, Membership Committee
2002 - 2004	Midwest Section of the American Society of Animal Science, Young Agribusiness Person Award Committee
2002 - 2003	<b>Past President.</b> Midwest Section of the American Society of Animal Science
2000 - 2003	American Society of Animal Science, Trainee Representative Nominating Committee
2001 - 2002	<b>Chair.</b> Midwest Section of the American Society of Animal Science, NPB Innovation in Swine Research Awards Committee
2001 - 2002	<b>President.</b> Midwest Section of the American Society of Animal Science
2000 - 2001	<b>Vice President.</b> Midwest Section of the American Society of Animal Science
1989 - 1998	American Society of Animal Science, L. E. Casida Award Committee
1995 - 1996	<b>Chair.</b> Midwest Section of the American Society of Animal Science, Physiology Program Committee
1989 - 1996	Biennial Reproduction Symposium Committee, American Society of Animal Sciences
1992 - 1995	Midwest Section of the American Society of Animal Science, Physiology Program Committee
1992 - 1993	<b>Chair.</b> Midwest Section of the American Society of Animal Science, Academic Quadrathlon Committee
1989 - 1992	Midwest Section of the American Society of Animal Science, Academic Quadrathlon Committee

#### *Review Panels*

2009	USDA Grant Review Panel - Animal Reproduction, USDA-NRI, Washington, D.C.
2008	USDA Grant Review Panel - Animal Reproduction, USDA-NRI, Washington, D.C.
2003 - 2006	OARDC Research Enhancement Competitive Research Grants, Ohio Agricultural Research Development Center, Wooster, OH



## Curriculum Vitae – M. L. Day

- 1998 USDA Grant Review Panel - Animal Reproduction, USDA-NRI, Washington, D.C.
- 1996 Review Panel for Dairy Cow Fertility Program, Dairying Research Corporation, Hamilton, New Zealand.

### *W-112 (W-2112) USDA Regional Research Committee*

- 1987 - Present Member
- 2009 – 2010, 1992 - 1993 Chair

### *Visiting Professors Hosted*

- 2012 - 2013 Dr. Jose Vasconcelos, UNESP, Botucatu, SP, Brazil
- 2008 - 2009 Dr. David Wolfenson, The Hebrew University, Rehovot, Israel
- 2007 - 2009 Dr. Alexandre Vas Pires, USP, Piracicaba, SP, Brazil

### **Administrative Service**

#### *Ohio State University*

- 1985 - 2015 **Faculty Supervisor.** OSU Beef and Sheep Center
- 2006 - 2015 **Chair.** Graduate Studies Committee
- 2000 - 2015 **Building Coordinator.** Plumb Hall
- 2009 - 2013 **Coordinator.** Quarter to Semester Conversion for Graduate Students
- 2010 - 2011 **Chair.** Promotion and Tenure Committee
- 2004 - 2005 **Chair.** Standing Search Committee for Faculty Hires
- 2000 - 2001 **Chair.** Search Committee for Ohio Pork Industry Center Coordinator
- 1987 - 1995 **Program Coordinator.** Academic Quadrathlon Competition
- 2003 - 2015 Jackson Agricultural Station Advisory Committee
- 1990 - 2015 **Faculty Supervisor,** Jackson Agricultural Research Station

#### *University of Wyoming*

- 2015 - present **Department Head,** Department of Animal Science
- 2018 – present **Member,** UW Careers Everywhere Task Force
- 2019 – present **Member,** UW Research Planning Council
- 2018 – present **Member,** UW Facilities Utilization Sub-Council
- 2018 – present **Supervisor,** UW Rodeo Team
- 2016 – present **Member,** Hansen Arena Advisory Committee
- 2016 – present **Coordinator,** UW Animal Science Booth for NCBA meetings
- 2015 – present **Member,** College of Ag. and Natural Resources Advisory Board
- 2015 – 2018 **Coordinator,** 2+2 Articulation Agreements with Community Colleges
- 2016 **Chair,** Panhandle Research and Extension Center External Review