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**Position Responsibility Statement: July 1 2018 and ending June 30 2023**

Dr. Peggy Auwerda Position of Responsibility Statement (PRS) is 50% extension and 50% teaching as agreed upon in her letter of intent and signed PRS, February 10, 2019. Specifically under these categories of responsibility the following areas were outlined for completion;

**Teaching/Advising Responsibilities 50%**

Responsibilities include instruction of undergraduate courses in equine sciences, assisting with other courses as appropriate, advising undergraduate students, working with student clubs and integrating teaching and outreach activities. Assistance with undergraduate internships and careers in equine and animal science fields is also expected. Assistance with new student orientation, student and parent visits to campus, student recruitment and department-hosted student and parent events is expected.

**Extension Responsibilities 50%**

Extension responsibilities include dissemination of adult and youth equine educational materials and programs appropriate for the equine industry and clientele groups in Iowa. Creation, management and assistance with on-campus youth and adult education programs and competitions, coordinating off-campus extension activities such as the Equine Judges training and certification program and adult and youth education and competitive events is expected.

**Institutional Service** (outreach, economic development, international, diversity)

Dr. M. Auwerda serves on Department of Animal Science committees as directed.

<b>Education Degree</b>	<b>Institution</b>	<b>Date</b>
PhD	University of Illinois, Champaign-Urbana, IL	1988
MS	University of Illinois, Champaign-Urbana, IL	1986
BS	Illinois State University, Normal, IL	1982

### **Record of Professional Experience**

1. 2009 to present. Associate Professor. Department of Animal Science, Iowa State University, Ames, Iowa. Appointment: 50% Teaching, 50% Extension
2. 1995 to 2009. Associate Professor. Department of Animal Science, Iowa State University, Ames, Iowa. Appointment: 78% Teaching, 22% Extension
3. 1989 to 1995. Assistant Professor. Department of Animal Science, Iowa State University, Ames, Iowa. Appointment: 78% Teaching, 22% Extension
4. 1988 to 1989. Assistant Professor. Director Equine Studies & Equine Instructor, Cazenovia College, Cazenovia NY. Appointment: 100% Teaching
5. 1982 to 1988. Graduate Assistant, Department of Animal Science, University of Illinois, Champaign, Illinois

### **Record Professional Associations**

1. American Society of Animal Science
2. Equine Science Society
3. National Association Equine Affiliated Academics
4. American Quarter Horse Association
5. Iowa Horse Council

### **Awards, Honors, And Recognition**

1. Meritorious Service Award. 2009. Iowa Horse Council
2. Waite, K., Skelly, C., Shelle, G., Miller, P., Martinson, K., Anderson, K. National University Technology Network (NUTN) 2013 Shirley Davis Award for Excellence in Blended Learning for the Equine Business Network. Submitted by eXtension HorseQuest and My Horse University

## **Teaching (50% Of Appointment)**

### **Current Teaching Appointments**

**Animal Science 216. Equine Science.** 3 credits. Taught Spring 1996 to 2006, 2018-current. The course was designed and implemented in 1996. The course was designed to introduce students to the life cycle of the horse including the history of the use of horses, anatomy, physiology, reproduction, nutrition, behavior, and health issues. *(Responsibilities – 100% instructor)*

**Animal Science 313 (Formerly ANS 413). Exercise Physiology of Animals.** 2 credits. F94-F97, S11, F12-F15, 2017 - current. . Goals of the course are to teach students about the interaction of physiological development relative to athletic performance in equine and performance canine. Dr. M. Auwerda taught the course from 1994-1997. Graduate students taught the course for a few years, the course was discontinued for a few years, and Dr. M. Auwerda reinstated the course in 2011. *(Responsibilities – 100% instructor)*

**Animal Science 490. Independent Study.** 1 to 3 credits. 1994-2020 Sole Instructor (Section A or H). 1 to 3 credit hours (repeatable for maximum of 6 credits). Elective. Can be taken spring, summer and fall. Open to juniors and seniors in animal science and dairy science showing satisfactory preparation for problems chosen. Individual topic conference and preparation of report.

**Animal Science 497. Undergraduate Teaching Experience in Animal Science. (2010-2020)**  
Development of oral and written communication skills of technical concepts in animal science. Emphasis

on organizational skills, conducting activities and interpersonal communication skills. Responsibilities in a class under direct supervision of a faculty member.

#### **Former Courses Designed and Taught**

**Animal Science 115. Horsemanship and Equitation.** 1989-1994 (100% instructor), 98-06 (Taught off campus and I supervised the course),

**Animal Science 199 (Also taught as 490). Marketing and Management of Equine Events.** 1 credit. Taught Spring & Fall 2005, 2006, 2007, 2008, 2009, 2011, 2012). Course goals were to develop an understanding and appreciation for designing and administering an equine event including budgeting and marketing. (*Responsibilities – 100% instructor*)

**Animal Science 217 (Formerly ANS 416X). Equine Farm Practicum.** 2 credits. Taught Fall 2002-2011. *Dr. M. Auwerda was the sole instructor.* The course was designed to be a cooperative activity where students worked at the barn and helped prepare horses for sale. Part of the course required students to participate in chores at the horse barn – feeding and turn-out. The course also covered grooming, show preparation, photography, biosecurity, health care, business management, marketing, and nutrition.

**Animal Science 316. Training the Horse.** 3 Credits. Fall 1994-2005. The course was an intensive hands-on course incorporating problem solving skills. Each student was assigned a horse and had to progress themselves as well as the horse over the course of the semester. (*Responsibilities -100% instructor*)

**Animal Science 414. Equine Nutrition.** 2 Credits. S10, F11. The course was offered on-line. The students were required to balance a number of rations and were required to research a topic related to equine nutrition.

The course was discontinued in 2012. (*Responsibilities – 100% instructor*)

**Animal Science 415. Equine Systems Management.** 3 credits. Spring 1990 – Spring 2016. Students are assigned an extensive business management project. A scenario where students inherit land and some money is provided to them. The students must design a cash flow positive equine business. The project includes writing a business plan, designing a horse facility, nutrition program, health care program, marketing program and analyzing cash flow. (*Responsibilities – 100% instructor*)

**Animal Science 417. Equine reproductive Management.** Spring 94-95, Spring 03-Spring 09. The course involved having students help with pre-foaling, foaling and post-foaling activities. In addition, students learned to handle mares as well as stallions. The course covered in-depth equine reproductive physiology providing students with scenarios where they had to figure out the hormones to use to manipulate the mare's cycle. (*Responsibilities – 100% instructor*)

**Animal Science 495.** 3 credits. Spring 14, Spring 16. International Travel to Brazil

**Teaching effectiveness, including student evaluation summaries.**

<u>Fall 2020 Course</u>	<u>Credit Hours</u>	<u>Enrollment</u>	<u>Survey responses</u>	<u>Instructor established an environment conducive to learning</u>	<u>Overall rating of the course</u>
AN S 313	2	25	9	4.33	4.78
AN S 216	3	80	35	4.37	4.29
<u>Spring 2020 Course</u>	<u>Credit Hours</u>	<u>Enrollment</u>	<u>Survey responses</u>	<u>Overall the instructor has been an effective teacher</u>	<u>This course has been effective in advancing my learning</u>
AN S 313	2	35	13	4.15	4.23
AN S 216	3	74	25	4.54	4.6

**Student Comments from 2020**

Course evaluations for both courses demonstrated the students had a positive experience participating in the courses.

ANS216 comments: “Going to labs in person and having a really organized canvas!”, “The assignments and modules were easy to find and very organized!”, “Units flowed really well into the next new material”, “Having plenty of information about each topic for each homework and the tests”, “The lab assignments and homework assignments were very thorough and covered all material that we needed to know. These assignments helped me learn the material more than anything else”.

ANS313 comments: “She gave us additional resources to help us understand where she found her information and allow us to double check.”, “The course was easy to follow and keep up with on canvas. There were plenty of assignments, but nothing that was over the top.”, “I think that this class overall had very effective learning styles. With online learning, it is harder to comprehend the material because we don’t have the face to face classes”, “The lecture slides, presentation videos, additional articles and quizzes helped my learning the most. It was easy to take notes and complete the required assignments”.

**New courses developed and innovative teaching techniques introduced.**

Recognizing that students learn through a unique combination of auditory, visual and kinesthetic methods, I incorporate diverse methods in my teaching. My lectures have included image-rich PowerPoints, DVDs, YouTube videos, guest speakers, discussions, and Top Hat questions. I implement active learning activities such as “turn to your partner”. Because working cooperatively is essential for our students’ future success, I incorporate group activities in several classes, including evaluation of self and one another. Hands-on learning experiences are extremely important in the horse industry so, depending on the course, material is presented or demonstrated to the student and the student is then able to practice the topic. The experience allows a student to test, sense and apply information learned. In addition, hands-on learning empowers the students and builds their confidence in their knowledge and skill sets.

I was an early adopter of learning and communication platforms including WebCT, Blackboard, Canvas and StudyMate. I extensively used ThinkSpace, a learning tool developed at Iowa State University. Because of my expertise in use of ThinkSpace to aid student learning, I disseminated information about use of this teaching platform in poster presentations at two national conferences. I am scheduled as a speaker in a workshop about ThinkSpace this June at the National Association Equine Affiliated Academics. I also build assignments into courses so that students develop competencies in technology use. One novel example is developing and posting a blog on the Equine Science website during the Study Abroad trip to Brazil, which I co-led

With a combined extension and teaching appointment, I have built effective synergies into my program including providing equine-interest students with professional development and outreach opportunities, and integrating horse owners into teaching activities. Under my mentorship, student volunteers have gained experience as speakers, demonstrators, general assistants and designers for the ISU booth at the Iowa Horse Fair. These practical experiences extend their learning and have aided development of communication skills and professional interaction with the public.

### Technological Activities Used In Teaching & Extension

1. Equine Blog  
Published on the equine science website.  
*Students who traveled to Brazil in 2016 posted a blog about their travels. Extra credit for current ANS216 and ANS313 students to write a blog on a current issue.*
2. Equine Science Web Site  
*Teaching Extension*  
*Designed and coordinate the site.*  
Selected papers written by students are published in on the website. <http://extension.iastate.edu/equine>
3. Moodle  
*Developed a site for Master Equine Managers to access recordings, Power Points, articles and a large list of references.*
4. Facebook – Iowa State University Equine Science. 2003-2020  
Facebook Equine Science is used to post class images, extension activity images, events, Grazing News, club activities (B&B horse show) and posts relevant to the horse industry that other horse associations or groups have posted. 1850 Likes  
<https://www.facebook.com/ISUEquine>
5. Grazing News  
Selected papers written by students were published in the newsletter. An on-line newsletter sent monthly to over 2000 subscribers. Open Rate 25-30%

### Teaching Activities & Accomplishments

1. International Travel to Brazil with Students 2014, 2016
2. Equestrian Club Advisor 2014-2016
3. Iowa State University Equine Science/Extension and Outreach Web-Site developed and maintained. <http://www.extension.iastate.edu/equine> 2015-Current
4. Iowa State University Block and Bridle Horse Show Facebook page developed and maintained. <http://www.facebook.com/bbhorse> 2011-2012
5. Assist with Animal Science 116X 2012
6. Substitute instructor for AnS 317A 2012-2019
7. Husby, K. Assessment of *Bacillus Subtilis* PB6 in Horses. 1<sup>st</sup> ISU Undergraduate Research Symposium 2007
8. Supervise Equine Farm – Supervise barn manager, horse inventory and sales, farm budget, breeding horses, foaling mares, evaluation of animal performance, and training horses. *Department Head discontinued faculty involvement in the management of the farms.* 1989-2005
9. Block and Bridle Horse Show 1990-2012
10. Block and Bridle Horse Interest Advisor 1990-2011
11. Animal Science Round-Up 1990-2012
12. Equine Information and Open House at the Horse Barn 2006-2001
13. AQHA Legacy Award - 50 consecutive years breeding Quarter Horses 2004
14. SCAVMA. Equine Reproduction 2002
15. Pre-Vet Club. Equine Reproduction & Foaling 2003
16. Pre-Vet Symposium. Equine Nutrition 1998
17. Animal Science Seminar. Force of the Horse 1999
18. SCAVMA. Equine Nutrition 1998

### Horse Program Outside Reviewer responsibilities

1. University of Wisconsin River Falls Equine Program Review (2013)
2. Chair Ellsworth Community College, Iowa Falls, IA Equine Program Review (2011)

### Undergraduate Students Advised Per Semester

- Dr. M. Auwerda currently advises ~35 students per year.
- From Spring 2011 to Spring 2019 Total advisees graduated 118

## Graduate Student Advising

<i>Completed: Served as Program of Study Major Professor</i>			
Student	Major	Degree	Date
Anna McKelvey	Agriculture Education <i>Master Equine Manager Evaluation</i>	M. Ag.	2008
Jennifer Ingwerson	Animal Physiology <i>Effect Of Cysterelin On Ovulation Rate In Mares</i>	M.S.	2007
Megan Hall	Animal Physiology <i>The Effect of a Hindgut Modifier Pelleted Product Containing Saccharomyces cerevisiae on Cecal pH in the Equine Hindgut</i>	M. Ag.	2005
James McGovern	Agriculture Education <i>Training And Teaching Methods – Video Project</i>	M.Ag.	2001
Josie Coverdale	Animal Nutrition <i>Effect of Horse-Bac Liquid on Gut Physiology in Horses.</i>	M. S.	2000
Liv Sandberg	Animal Nutrition <i>The Effect Of Intensive Training And B-Hydroxy-B-Methylbutyrate (HMB) On The Physiological Response To Exercise In Horses.</i>	M.S.	1998
David McCollum	Animal Nutrition <i>The Metabolic Response To Exercise And Conditioning: A Comparison Between Arabians And Quarter Horses</i>	M. S.	1995
Teresa Martinez	Animal Nutrition <i>Taurine Concentration In The Plasma Of Healthy And Sick Foals And The Colostrum And Milk Of Mares</i>	M. S.	1994
<i>Served as Program of Study Committee Member</i>			
Student	Major	Degree	Date
Holly Hendershot	Agriculture Education <i>Equine Quality Assurance Program for Youth</i>	M.S.	2021
Sarah Zwiefel	Agriculture Education <i>Marketing Your Equine Business: A Curriculum for Extension Programming</i>	M.S.	2020
Jill Walderbach	Agriculture Education <i>Development of an Equine Issues Course</i>	M.S.	2012
Kelly Cline	Agriculture Education <i>Equine Assisted Learning And Development: Using Horses As Partners In Experiential Learning</i>	M.S.	2012
Hannah Swanborn	Agriculture Education <i>4-H Equine Life Skills Program</i>	M. Ag.	2012
Jennifer Dillon	Agriculture Education <i>Effect Of Cysterelin On Ovulation Rate In Mares</i>	M.S.	2008
Wendy Bonner	Agriculture Education <i>Developing an Undergraduate Equine Science Course for NIAAC</i>	M. Ag.	2008
Megan Greene	Agriculture Education <i>Developing a Course for Teaching Undergraduate Students to Teach Equitation</i>	M. Ag.	2006
Josie Coverdale	Animal Nutrition <i>Effect of Forage Addition to the Diet on Rumen Development in Calves</i>	Ph.D.	2003

Carrie Hammer	Animal Nutrition	Ph.D.	2003
<i>Effects of Exogenous Immunoglobulins in Neonatal Animals</i>			
Erin McCaffrey	Agriculture Education	M. S.	2001
<i>Equine Science WebQuest</i>			
Carrie Hammer	Animal Nutrition	M. S.	1998
<i>Effect Of Obstetrical Assistance In Dairy Calves</i>			
Sushila Kapil	Animal Nutrition	M. S.	1994
<i>Characterization Of Neutrophil CD18 Expression In Jersey Cows and Their Calves During the Preparturient Period</i>			

### Guest Lecturing

ANS 116X Assist instructor

AnS 317A Substitute for instructor when gone

ANS 320 Livestock Feeding Program Design

Equine Nutrition

ANS 332 Laboratory Methods in Reproduction

Laboratory Methods in Reproduction -  
Equine

ANS 518 Digestive Physiology and Metabolism on Non-Ruminants

Equine Nutrition

ANS 114 Survey of the Animal Industry

Horse Laboratory Section

### Teaching Related Publications and Media

#### a. Teaching Conference Proceedings

1. **Auwerda, P.**, C. Weiner, and P. Boyle. 2012. Senior Equine Management Course Uses ThinkSpace to Develop Business and Facility Management Project. Teaching and Learning in the Animal Sciences. Madison, WI. p. 68.
2. **Auwerda, P.**, C. Weiner, and P. Boyle. 2012. ThinkSpace – An Innovative Approach to a Current Issues and Business Management Project in a Senior Level Equine Systems Management Course. National Association Equine Affiliated Academics. Billings, MT. p. 26.
3. **Auwerda, P.** and G. Dahlke. 2010. Relevant Equine Intensive Nutrition Software. Midwest Animal Science. Des Moines, IA. p. 15.
4. **Miller-Auwerda, P.** and M. Hall. 2005. Utilizing undergraduate students for educational programs and promotion of a horse program. 19<sup>th</sup> Equine Science Society. Tucson, AZ.
5. **Miller-Auwerda, P.** and G. Dahlke. 2005. Brands For Horses – Ration and Nutritional Decision Software. 19<sup>th</sup> Equine Science Society, Tucson, AZ.

#### b. ANS 216 – Equine Science Videos <https://iastate.box.com/v/ANS216-Video-Project>

1. A Ride to Remember - Racing Career Jockeys by Tiana Black
2. Accessing the Controversy of Rodeo in the Equine Industry by Sarah Hetherington
3. Equine Breeder Ranch and Rodeo by Landon Foster
4. Equine Cloning by Haley Burling
5. Equine Dentistry by Claire Roe
6. Equine Pedigree Analyst by Megan Marchese
7. Equine Science Instructor by Colleen Curtin
8. Equine Veterinarian Technician by Sage Sherburne
9. Equine Veterinarians in Practice by Erin Kay
10. Farrier's Care for Your Horse's Hooves by Tina Poulias
11. Foaling Difficulties by Katrina Feeders
12. Horse Pharmaceuticals by Alexis Oehlerich



13. How Horses Learn by Kaitlin Wiley
14. Issues Facing Soring and Abusive Training Methods by Julie Fisher.
15. Navicular Disease by Katrina Lee
16. Performance Enhancing Drugs in the Racing Industry by Kathryn Richardson
17. The Shortage of Large Animal Vets in Rural America by Charlotte Everist
18. The Use of Bits and Their Effect on Respiration by Emma Kelley
19. Veterinarians in the Equine World by Makayla Lange

**c. Blog Posts and Articles (Web Pages) written by Students and Reviewed by Peggy Auwerda (2018-2020)**

1. Bishop, K. and **P. Auwerda**. 2020. [Why a Clover Leaf Pattern?](#)
2. Treadwell, C. and **P. Auwerda**. 2020. [Setting our Sights on Equine Glaucoma](#)
3. McCartan, B. and **P. Auwerda**. 2020. [Deep Digital Flexor Tendon Damage in Barrel Racers](#)
4. Granzow, B. and **P. Auwerda**. 2020. [Western Pleasure Horse Tears Suspensory](#)
5. Kay, J. and **P. Auwerda**. 2020. [Journey to a Career as a Practicing Veterinarian](#)
6. Cihak, C., J. Vergauwen, and **P. Auwerda**. 2020. [Management and Care of Scurry Driving Equine Teams](#)
7. Berkland, J., K. Walter, and **P. Auwerda**. 2020. [Superficial Digital Flexor Tendinitis](#)
8. Berkland, J., K. Walter, and **P. Auwerda**. 2020. [Kentucky Derby: Physiologically Training the Racehorse](#)
9. Bishop, A. and **P. Auwerda**. 2020. [Navicular Disease in Western Pleasure Horses](#)
10. Kosusnik, A. and **P. Auwerda**. 2020. [Training a Horse for Being a Working Cow Horse](#)
11. Rettkowski, M. and **P. Auwerda**. 2020. [Development of a Barrel Racing Conditioning Program](#)
12. Brownell, J. and **P. Auwerda**. 2020. [The Evaluation and Training of Equine Western Pleasure](#)
13. Schroeder, J. K. Schutter, and **P. Auwerda**. 2020. [The Evaluation and Training of Arabian Endurance Racing](#)
14. Peterson, E. and **P. Auwerda**. 2019. [A Severe Tummy Twist. Blog](#)
15. Wylder, A. 2019. [A Summery Summer Summary . Blog](#)
16. Treadwell, C. and **P. Auwerda**. 2019. [Setting Our Sites on Equine Glaucoma. Blog](#)
17. Treadwell, C. 2019. [Wrangling the Rockies . Blog](#)
18. Marburger, C. and **P. Auwerda**. 2019. [How to Train a Horse for a Steer Wrestling Event. Article](#)
19. Haefner, Avery. 2019. [Spending time with horses can improve your health! Blog](#)
20. Bishop, Kammi. 2019. [Why a Clover Leaf Pattern?. Blog](#)
21. Kosusnik, A. and **P. Auwerda**. 2019. [Training a Horse for Being a Working Cow Horse Article](#)
22. Rettkowski, M. and **P. Auwerda**. 2019. [Development of a Barrel Racing Conditioning Program Article](#)
23. Brownell, J. and **P. Auwerda**. 2019. [The Evaluation and Training of Equine Western Pleasure Article](#)
24. Simpson, H. 2019. [Exchange Program at Wroclaw University of Environmental and Life Sciences](#)
25. Wileman, C. and **P. Auwerda** 2019. [Heat Therapy and Electrotherapy in Equine](#)
26. Forbes, M. and **P. Auwerda**. 2018. [Barrel Racing](#)
27. Simpson, H. and **P. Auwerda**. 2018. [Kodiak Baptist Mission Internship](#)
28. von Rentzel, M. and **P. Auwerda**. 2018. [The Sport of Reining](#)
29. Wiles, M. and **P. Auwerda**. 2018. [The Physiology of a Champion Driver: Form to Function](#)
30. Swam, A and **Miller-Auwerda, P.** 2014. Social Learning in Horses. *Grazing News*. June.
31. Dunham, L. and **Miller-Auwerda, P.** 2014. s. *Grazing News*. June.
32. Abbott, P. and **P. Miller-Auwerda**. 2014. The Use of Cisplatin In The Treatment Of Equine Melanoma. *Grazing News*. December.
33. Pomfret, A. and **P. Miller-Auwerda**. 2014. Equine Cardiac Disorders: Impact on Athletic Ability and Recommendations for the Equine Athlete. *Grazing News*. December.
34. Coughlin, B. and **P. Miller-Auwerda**. 2012. Using Bedding Material to Increase Equine Welfare. *Grazing News*. October.
35. Peterson, K. and **P. Miller-Auwerda**. 2012. Sporting Activity Following Colic Surgery in Horses. *Grazing News*. July.
36. Lawler, K. and **P. Miller-Auwerda**. 2012. Review of Stem Cell Therapy Research. *Grazing News*. June.
37. Carrothers, A. and **P. Miller-Auwerda**. Review of Voluntary Intake and Digestibility of Teff Hay Fed to Horses. 2012. *Grazing News*. May.
38. Naaktgeboren, K. and **P. Miller-Auwerda**. 2011. Dealing with Neurological Emergencies. *Grazing News*. November.
39. Kurth, L. and **P. Miller-Auwerda**. 2011. Equine Infectious Anemia. *Grazing News*. September.
40. Burgart, M. and **P. Miller-Auwerda**. 2011. Equine Joint and Muscle Forces. *Grazing News*. July.

41. Nettleton, A. and **P. Miller-Auwerda**. 2011. The Immune Response to Exercise. *Grazing News*. June.
42. Spenler, K. and **P. Miller-Auwerda**. 2011. Tryptophan. *Grazing News*. June.
43. Harris, M. and **P. Miller-Auwerda**. 2011. Eating Frustration in Stabled Horses. *Grazing News*. May.
44. Dixon, J. and **P. Miller-Auwerda**. 2011. Glucosamine. *Grazing News*. May.
45. Oberembt, K. and **P. Miller-Auwerda**. 2011. Acute and Chronic Laminitis. *Grazing News*. April.
46. Chick, K. and **P. Miller-Auwerda**. 2011. Equine Protozoal Myeloencephalitis. *Grazing News*. April.
47. Ehlinger-Beecher, C. and **P. Miller-Auwerda**. 2011. USDA Quarantine Procedure. *Grazing News*. February.
48. Donovan, D. and **P. Miller-Auwerda**. 2011. Leptospirosis. *Grazing News*. January.
49. Marrone, M. and **P. Miller-Auwerda**. 2010. Equine Uveitis. *Grazing News*. December.
50. Linden, R. and **P. Miller-Auwerda**. 2010. Methylsulfonylmethane (MSM). *Grazing News*. June.
51. Gealow, L. and **P. Miller-Auwerda**. 2010. Adequan® I.M. (polysulfated glycosaminoglycan). *Grazing News*. June.
52. Benton, J., **P. M. Auwerda**, C. Youngs and L. Evans. 2010. Induction of Ovulation and LH Response in Cyclic Mares Treated with Gonadorelin Diacetate Tetrahydrate. Iowa State University Animal Industry Report. A.S. Leaflet R2535.
53. Mutschler, A. and **P. Miller-Auwerda**. 2009. Equine Rabies. *Grazing News*. September.
54. Murphy, J. and **P. Miller-Auwerda**. 2009. Black Walnut Toxicity. *Grazing News*. September.
55. Hall, A. and **P. Miller-Auwerda**. 2009. Ringbone. *Grazing News*. June.
56. Haban, A. and **P. Miller-Auwerda**. 2009. Prevention of Insect-Borne Diseases. *Grazing News*. June.
57. Anderson, B. and **P. Miller-Auwerda**. 2008. Determination of Equine Fetal Gender by Transabdominal Ultrasound. *Grazing News*. August.
58. Bullock, A. and **P. Miller-Auwerda**. 2004. Hoof and Leg Care. *Grazing News*. November.
59. Westmeyer, J. and **P. Miller-Auwerda**. 2004. Gaits of Horses. *Grazing News*. November.
60. Haase, K. and **P. Miller-Auwerda**. 2004. Professional Rodeo Cowboy Association. *Grazing News*. November.
61. Chittick, W. and **P. Miller**. 1998. Equine Vices. *Horsepower*.
62. Kee, J. and **P. Miller**. 1998. Tying-up: Azoturia and Rhabdomyolysis. *Horsepower*.
63. Behrens, M. and **P. Miller**. 1998. Equine Rhinopneumonitis. *Horsepower*.
64. Eckles, N. and **P. Miller**. 1998. Uterine Cysts In Mares. *Horsepower*.
65. Keller, K. and **P. Miller**. 1997. Equine Shipped Semen: Points of Interest to the Mare Owner. *Horsepower*.
66. Scholz, S. and **P. Miller**. 1997. The Causes, Effects, and Treatments of Cribbing. *Horsepower*.
67. Kinser, T. and **P. Miller**. 1997. Form To Function. *Horsepower*.
68. Mahr, J. and **P. Miller**. 1996. Does "Sweating" Reduce The Neck And Jowl Region On A Horse? *Horsepower*.
69. Hill, J. and **Miller, P.** 1996. Bowed Tendon Treatment In The Horse. *Horsepower*.
70. Anderson, N. and **P. Miller**. 1996. What Is Heaves And How Can Heaves Affect My Horses? *Horsepower*.
71. Kovich, D. and **P. Miller**. 1996. Breeding For Color. *Horsepower*.
72. Dukeshier, S. and **P. Miller**. 1996. Is Pounce Toxic To Horses? *Horsepower*.
73. Burks, M. and **P. Miller**. 1996. The Horse I Bought Is Not The Horse On The Registration Papers. *Horsepower*.
74. Hill, J. and **P. Miller**. 1996. Worms and Dewormers. *Horsepower*.
75. Beauchamp, M. and **P. Miller**. 1996. Hypothyroidism in Horses. *Horsepower*.
76. Brown, M. and **P. Miller**. 1995. Leafhoppers and Alfalfa hay. *Horsepower*.
77. Kovich, D. and **P. Miller**. 1995. Antigen Incompatibility and Hemolytic Disease. *Horsepower*.
78. Dukeshier, S. and **P. Miller**. 1995. Is Alsike Clover Toxic to Horses? *Horsepower*.

### Teaching Proposals submitted

1. **Auwerda, P.** 2010. Equine Nutrition and Feeding, AnS 414X. Distance education program grant: College of Agriculture and Life Sciences at Iowa State University. \$2500. *Contributed 100% of grant effort. Creation of a new course for AnS students and students in other areas. The course was on-line and taught using Adobe Connect*

## **Courses Taken To Improve Teaching/Extension Skills**

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1. Synchronous communication tools	2020
2. Choose your instructional tool adventure	2020
3. Instructional innovations in the College of Agriculture and Life Sciences	2020
4. Managing Bias	2020
5. Title IX Training – Supervisors	2020
6. Understanding FERPA	2020
7. Child Abuse Awareness and Prevention	2020
8. ISU Inclusive Classroom Training	2020
9. Transparent Design in Higher Education Teaching and Leadership	2020
10. Canvas Roundtable. Brenton Center.	2018
11. Applying Quality Matters Workshop. CELT	2018
12. Content Editor Training for Extension	2018, 2019
13. Working on Effective Learning for Adults: Learning Objectives	2018
14. Terro Training	2018
15. ThinkSpace Workshop	2017
16. Team Based Learning	2016
17. ThinkSpace Community	2016
18. Communication in the Classroom & Learning Circle	2016
19. Critical Thinking Teaching & Learning Circle	2015
20. Team Based Learning	2015
21. ThinkSpace Community	2015
22. Blackboard Users Group (BUG) Meeting	2015
23. Understanding FERPA	2015
24. BbLearn: Designing Your Course to Promote Student Success	2014
25. Blackboard Users Group (BUG) Meeting	2014
26. SoftChalk	2014
• Create Interactive eBooks with SoftChalk eBook Builder	
• Create, Manage and Share Content with SoftChalk Cloud	
• An Overview of SoftChalk Cloud	
• TextPoppers, Images and Hyperlinks	
• Navigation Features and Sidebars	
• Embedded Media	
• Quizzes, Quiz Groups and SoftChalk ScoreCenter	
• Interactive Learning Activities: The Presentation Group	
• Interactive Learning Activities: The Scoring Group	
• Creating, Importing and Modifying Tables	
27. Flipped Classroom	2014
28. Title IX Awareness and Violence Prevention for Faculty and Staff	2013
29. Unlawful Harassment Prevention for Higher Education Faculty	2013
30. Unlawful Harassment Prevention for Supervisor Supplement for Higher Education Faculty	2013
31. Learning Ecosystem Faculty Focus Group	2013
32. Project Learn	2013
33. What's New in Blackboard Learn	2013
34. What's New with Responseware and Turning Point	2013
35. Blackboard Users Meeting	2013
36. Intermediate Dreamweaver	2012

37. AQHA Show Management School	2012
38. CELT - Mobile Learning Opportunities	2012
39. CELT - Bb Innovative Teaching Series #6: Why and How to Best Use Rubrics in Blackboard Learn 9.1	2012
40. CELT-Bb Innovative Teaching Series-4-OnlineTesting:How to Use Standard CMS Tools to Reduce Cheating	2012
41. Thinkspace Users Group Meetings	2012
42. Blackboard Users Group Monthly Meeting	2012
43. Blackboard Learn Grade Center II: Advanced	2012
44. Blackboard Users Group Monthly Meeting	2011
45. Hands-On ThinkSpace: A Multipurpose Instructional Tool	2011
46. ISU Extension Annual Conference	2011
47. Blackboard Users Group Monthly Meeting	2011
48. Intro to ThinkSpace, a Multipurpose Instructional Tool	2011
49. Blackboard Learn: Communication with Students	2011
50. Blackboard Learn: Developing Learning Activities	2011
51. ISU Extension Annual Conference	2010
52. Introduction to Dreamweaver	2010
53. Introduction to Dreamweaver – Tables and More Links	2010
54. Dreamweaver III – Layers and Behaviors	2010
55. Dreamweaver IV - Projects	2010
56. Introduction to Flash	2010
57. Introduction to Fireworks	2010
58. ISU Extension Annual Conference	2009
59. On-line Collaboration with Wimba Tools	2009
60. "Google Docs: Collaborative Tools for the Classroom"	2009
61. On-line Collaboration with Wimba Tools	2009
62. Invite Diversity	2008
63. Classroom Response System Using the New TurningPoint Clickers to Engage Students in the Class	2008
64. ISU Extension Technology Showcase – Case Studies Using Moodle, Collaboration Tools, Video: Shooting, Editing and Uploading, Uploading Video for Use in the CMS	2008
65. Wimba – A Virtual On-line Classroom	2008
66. Designing WebCT Vista	2008
67. Flash MX I: Introduction to Macromedia Flash	2004
68. A Beginner's Guide to Creating Web Pages for Instruction	2003
69. Microsoft FrontPage MS Office 2002 II: Advanced Formatting	2003
70. Adobe Acrobat I (v 5.0): Creating PDF Files for Universal Document Exchange	2003
71. American Quarter Horse Association Show Management Certification School	2006, 2008, 2009, 2012
72. Intermediate Photoshop II	2001
73. WebCT – Organizing and delivering your content	2001
74. Equine Reproductive Management and Artificial Insemination, Colorado State University	2000
75. Techniques For Handling and Utilizing Transported Cooled Equine Spermatozoa, Colorado State University	2000
76. Authoring Internet-Based Instructional Materials	2000
77. Introduction to WebCT	1998
78. Project Learn	1998
79. NACTA National Symposium	1997
80. North Central Teaching Symposium	1996

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## Extension (50% of Appointment)

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### Extension Achievements

1. Women Managing Horses. 2019-2020. The program is designed for women managing horse farms, boarding stables, land owners, and women just wanting to learn more about the horse industry and care of horses. It offers women the opportunity to learn more about managing Iowa's equine industry from a business and production perspective. The goal is to allow women to manage financial, marketing risks of their horse businesses leading to better business outcomes; improved land management, and equine welfare.
2. Master Equine Manager. 2013-2016. Revised the MEM program that incorporates 24/7 access to instruction, learning resources, written and practical assessments for adults and youth in 11<sup>th</sup> or 12<sup>th</sup> grade. The practical assessment was expanded to multiple locations including Nebraska, Connecticut and Virginia. In addition, an option was added where participants could perform a documented self-assessment. The modules and lessons are listed below.
  - a. Welfare of Horses - Horse Senses, Ethogram of the Horse. Psychological Needs of Horses, Modifying Horse Behavior, Equine Quality Assurance
  - b. Facilities and Equipment- Horse Housing, Environmental Control, Manure Management, Pasture, Paddocks, Pens & Shelters
  - c. Horse Nutrition – Digestive System, Hay for Horses, Feedstuffs, Grazing Management, Feeding Horses
  - d. Horse Health – Equine Emergency Care, Diseases, Parasites, Hoof Care
  - e. Selection of Horses - Conformation and Evaluation, Unsoundness's & Blemishes
3. Master Equine Manager I & II. 2005-2013. *Program developed with Dale Miller and Glen Easter to provide horse owners and enthusiasts with a comprehensive educational program that teaches the science of horse management. The Master Equine Manager program combines focused learning opportunities and discussion with hands-on experience. Individuals from around the nation have attended the program.*
4. Iowa Youth Horse Extravaganza. 1996-2019. Coordinated and worked with the newly formed 4H Equine Advisory committee to set up the jamboree. The extravaganza is a series of Horseless Horse contests and activities for youth interested in horses. These include Hippology, Quiz Bowl, Team Demonstration, Public Speaking, Photography, Poster, Clothes Horse, Woodworking, Poetry, Essay, Model Horse, Scrapbooking, and Digital Storytelling. Over 200 youth participate per year
5. Iowa Youth Horse Jamboree. 1996-2016. *Coordinated and worked with the 4H Equine Advisory committee to set up the jamboree. The jamboree is a series of Horseless Horse contests and activities for youth interested in horses. These include Hippology, Quiz Bowl, Team Demonstration, Public Speaking, Photography, Poster, Clothes Horse, Woodworking, Poetry, Essay, Model Horse, Scrapbooking, and Digital Storytelling. Over 200 youth participate per year*
6. Horseless Horse Project . 2003. *In conjunction with the 4-H Horse Advisory Committee we developed this new 4-H project*
7. Iowa 4-H Equine Endowment. 1996-2012. 1996-2015 *Collaborated with Iowa 4-H and Iowa 4-H Foundation to set up the Iowa 4-H Equine Endowment.*
8. Iowa Equine Task. 2004-2005. *Collaborated with Patty Judge, former Iowa Department of Agriculture and Land Stewardship Secretary, to setup the Iowa Equine Task Force. Goal – Conduct economic impact study. Completed. Ex-officio.*
9. Iowa 4H Equine Advisory Committee. 1995-2016. *Collaborated with Iowa 4-H and set up the Iowa 4-H Equine Advisory Committee.*
10. Iowa 4H Equine Advisory Committee. 1995-2019. Collaborated with Iowa 4-H and set up the Iowa 4-H Equine Advisory Committee. The committee meets 4X/year and members are instrumental in helping with the 4-H horse programs in the state.

### Responsibilities In Regional And National Activities

1. Horse Biz Network blog. 2012-2015. eXtension HorseQuest. *Dr. Auwerda's contribution 100%.*
2. Question wrangler, development of successful grants for north central region, development of educational material. 2007- 2020. eXtension HorseQuest. *Dr. Auwerda's contribution 100%*

## Extension Activities: Seminars and Programs Coordinated

1. Anderson, K., C. Skelley, K. Martinson, **P. Auwerda**, K. Waite, and G. Heyboer. 2013. Optimizing the Horse Industry Labor Force: A FREE Online Training Program focusing on human resource, liability, and farm safety issues. *Dr. Auwerda's contribution 40%*.
2. **Auwerda, P.** 2013. Master Equine Manager I
3. **Auwerda, P.** 2013. Functional Anatomy
4. **Auwerda, P.** 2012. Master Equine Manager I (Fall and Spring).
5. **Auwerda, P.** 2012. Equine Health and Prevention of Diseases.
6. **Auwerda, P.** 2012. Horse Health and Lameness
7. Anderson, K., C. Skelley, K. Martinson, **P. Auwerda**, K. Waite, and G. Heyboer. 2011. Keeping your equine business a vibrant part of rural communities. *Dr. Auwerda contribution 25%*
8. **Auwerda, P.** 2011. Master Equine Manager I (Fall and Spring).
9. **Auwerda, P.** 2011. Functional Anatomy.
10. **Auwerda, P.** 2010. Master Equine Manager 1 (Fall and Spring).
11. **Auwerda, P.** 2010. Breeding Management Workshop.
12. **Auwerda, P.** 2010. Equine Nutrition and Feeding.
13. **Auwerda, P.** 2010. 4-H Day at the Races.
14. **Auwerda, P.** 2009. Master Equine Manager 1 (Fall and Spring).
15. **Auwerda, P.** 2009. Breeding Management Workshop.
16. **Auwerda, P.** 2009. Functional Anatomy.
17. **Auwerda, P.** 2009. Equine Biosecurity.
18. **Auwerda, P.** 2009. Equine Business Management.
19. **Auwerda, P.** 2009. Horse Cruelty Investigation Workshop.
20. **Auwerda, P.** 2008. Master Equine Manager 1 (Fall and Spring).
21. **Auwerda, P.** 2008. Breeding Management.
22. **Auwerda, P.** 2008. Equine Emergency Care.
23. **Auwerda, P.** 2008. Horse Cruelty Investigation Workshop.
24. **Auwerda, P.** 2008. A Day in the Life of A Thoroughbred Race Horse.
25. **Auwerda, P.** 2007. Master Equine Manager 1 (Fall and Spring).
26. **Auwerda, P.** 2007. Breeding Management Workshop.
27. **Auwerda, P.** 2008. Swine-Equine Showcase.
28. **Auwerda, P.** 2007. Horse Cruelty Investigation Workshop.
29. **Auwerda, P.** 2006. Master Equine Manager 1 (Fall and Spring).
30. **Auwerda, P.** 2006. Breeding Management Workshop.
31. **Auwerda, P.** 2006. Equine Information Forum.
32. **Auwerda, P.** 2005. Breeding Management Workshop.
33. **Auwerda, P.** 2005. 4-H Horse Leaders Training.
34. **Auwerda, P.** 2004. Equine Information Forum.
35. **Auwerda, P.** 2004. Breeding Management Workshop.
36. **Auwerda, P.** 2004. Horse Owners Conference.
37. **Auwerda, P.** 2004. Equine Information Forum.
38. **Auwerda, P.** 2004. 4-H Horse Leaders Training.
39. **Auwerda, P.** 2003. Breeding Management Workshop.
40. **Auwerda, P.** 2003. Horse Owners Conference.
41. **Auwerda, P.** 2003. Equine Information Forum.
42. **Auwerda, P.** 2003. 4-H Horse Leaders Training.
43. **Auwerda, P.** 2002. Equine Information Forum.
44. **Auwerda, P.** 2002. 4-H Horse Leaders Training.
45. **Auwerda, P.** 2001. Equine Information Forum.
46. **Auwerda, P.** 2001. 4-H Horse Leaders Training.
47. **Auwerda, P.** 2001. 4-H Day at the Harness Races.
48. **Auwerda, P.** 2001. 4H Horse Leaders Training.
49. **Auwerda, P.** 2000. 4-H Horse Leaders Training.
50. **Auwerda, P.** 2000. 4-H Day at the Thoroughbred Races.
51. **Auwerda, P.** 1999. 4-H Day at the Thoroughbred Races.
52. **Auwerda, P.** 1998. Equine Breeding Management Seminar.

53. **Auwerda, P.** 1997. Riding Seminar.
54. **Auwerda, P.** 1996. Equine Business Management/Horse Show Management Seminar.
55. **Auwerda, P.** 1995. Broodmare Management Seminar.

#### **Extension Activities: Annual Programs**

1. Iowa Horse Judges Certification Clinic. 1994-2020. *Contribution: 100%. Peggy Miller-Auwerda was the administrator for the program*
2. Iowa State University Booth Coverage at the Iowa Horse Fair. 1994-2020. *Contribution: 100%. Peggy Miller-Auwerda and students organized and maintained the ISU booth.*
3. Iowa State Fair 4-H Horse Show Advisor. 1990-2020. *Contribution: 50%. Peggy Miller-Auwerda was the horse show advisor.*
4. Iowa 4-H Horse Judging Contest. 1990-2020. *Contribution: 100%. Peggy Miller-Auwerda was the administrator for the program and set up horse classes.*
5. Animal Science Round-Up. 2018-2020, 2012-2016, 1994-2009. *Contribution: 100%. Peggy Miller-Auwerda was the administrator for the program and taught workshops*
6. Extravaganza – The jamboree was converted into a 3-day week to include Quiz Bowl, Hippology and Horse Judging. 2015-2020. *Contribution: 100%. Peggy Miller-Auwerda was the administrator for the program and designed the curriculum for Hippology and Quiz Bowl Contests*
7. Iowa Youth Jamboree. 1996-2014. *Contribution: 100%. Peggy Miller-Auwerda was the administrator for the program and designed the curriculum for Hippology and Quiz Bowl Contests*
8. Ring Stewards Workshop. 2008-2012. *Contribution: 100%. Peggy Miller-Auwerda was the administrator for the program and presented information*
9. Groom Elite. 2003-2011. *A program at Prairie Meadows designed to educate the workers on the backside. Peggy Miller-Auwerda was an instructor and evaluator for examinations.*

#### **Publications**

##### **Peer Reviewed Journal Articles**

1. Coverdale, J. A., J. A. Moore, H. D. Tyler, and **P. A. Miller-Auwerda**. 2004. Soybean hulls as an alternative feed for horses. *J. Anim. Sci.* 82:1663-1668.
2. Hammer, C. J., H. D. Tyler and **P. A. Miller**. 2000. Effects of oral administration of concentrated equine serum IgG to newborn foals on passive immunity. *J. Equine Vet. Science.* 20:337-338.
3. Sime, D. M., R. L. Engen and **P. A. Miller-Graber**. 1994. Frequency and use of medications in horses racing at Prairie Meadows. *ISU Vet.* 56:15-17.

##### **Peer Reviewed Chapters In Books**

1. **Miller, P.A.** 1998. Protein metabolism in the horse. Basic Equine Nutrition and Its Physiological Functions. American Association of Equine Practitioners and Purina Mills, Inc. K. Thompson (ed).

##### **Published Abstracts**

1. **Auwerda, PM**, C Skelly, G Shelle, K. Anderson, KL Waite, KL Martinson. 2015. Evaluating knowledge gained through quizzes in an online employer training program for horse Industry professionals.
2. Anderson, K., Skelly, C., Martinson, K. L., Waite, K. L, **Auwerda, P.** and Heyboer, G. 2013. Simultaneous multi-state equine business education program. *Journal of Equine Veterinary Science.* 33:389..
3. **Auwerda, P.**, C. Weiner, and P. Boyle. 2012. Senior Equine Management Course Uses ThinkSpace to Develop Business and Facility Management Project. *Teaching and Learning in the Animal Sciences.* Madison, WI. p. 68.
4. **Auwerda, P.**, C. Weiner, and P. Boyle. 2012. ThinkSpace – An Innovative Approach to a Current Issues and Business Management Project in a Senior Level Equine Systems Management Course. *National Association Equine Affiliated Academics.* Billings, MT. p. 26.
5. **Auwerda, P.** and D. Miller. 2011. Master Equine Manager I Program. *J. Equine Veterinary Science.* 31(5):331.
6. **Auwerda, P.** and D. Miller. 2011. Master Equine Manager II Program. *J. Equine Veterinary Science.* 31(5):331-332.
7. **Auwerda, P.** and G. Dahlke. 2010. Relevant Equine Intensive Nutrition Software. *Midwest Animal Science.* Des Moines, IA. p. 15.

8. **Miller-Auwerda, P.** and M. Hall. 2005. Utilizing undergraduate students for educational programs and promotion of a horse program. 19<sup>th</sup> Equine Science Society. Tucson, AZ.
9. **Miller-Auwerda, P.** and G. Dahlke. 2005. Brands For Horses – Ration and Nutritional Decision Software. 19<sup>th</sup> Equine Science Society, Tucson, AZ.
10. Hall, M. and **P. Miller-Auwerda.** 2005. Effect of a *Saccharomyces Cerevisiae* Pelleted Product on Cecal pH in the Equine Cecum. 19<sup>th</sup> Equine Science Society. Tucson, AZ.
11. Booth, J.A., J. A. Moore, H.D. Tyler, and **P.A. Miller.** 2003. Soybean Hulls as an Alternative Feed for Horses. 18<sup>th</sup> Equine Nutr. and Physiol. Symp., East Lansing, MI. p. 31.
12. **Miller-Auwerda, P.A.** and D. Schwaab. 2002. Leadership training using the Iowa Communications Network. American Youth Horse Council Symposium. NC. p. 21.
13. Booth, J. A., **P. A. Miller-Auwerda,** and M. A. Rasmussen. 2001. The effect of a microbial supplement (Horse-Bac) containing *Lactobacillus Acidophilus* on microbial and chemical composition of the cecum in the sedentary horse. 17<sup>th</sup> Equine Nutr. and Physiol. Symp., Lexington, KY. p. 183.
14. Booth, J. A., **P. A. Miller-Auwerda,** and M. A. Rasmussen. 2001. The effect of a Horse-Bac liquid on nutrient digestibility, gut physiology, and the physical response to exercise in horses. 17<sup>th</sup> Equine Nutr. and Physiol. Symp., Lexington, KY. p. 259.
15. Hammer, C. J., H. D. Tyler, and **P. A. Miller.** 1999. Effects of oral administration of concentrated equine serum to newborn foals on immunoglobulin G levels. J. Anim. Sci. 77 (Suppl 1): p. 75.
16. Sandberg, L., **P. Miller,** and J. Fuller. 1998. The effect of intensive training and  $\beta$ -hydroxy- $\beta$ -methyl butyrate (HMB) on muscle glycogen concentrations in the horse. J. Anim. Sci. 76 (Suppl. 1): p. 175.
17. **Miller, P.** and J. Fuller. 1998. The effects of supplemental  $\beta$ -hydroxy- $\beta$ -methyl butyrate (HMB) on training and racing Thoroughbreds. Association for Equine Sports Medicine., Leesburg, VA. p. 13.
18. Thompson, D., **P. Miller,** L. Kincaid, L. Sandberg, and J. Kern. 1997. Growth hormone and prolactin responses to multiple and extended exercise bouts in geldings. 15<sup>th</sup> Equine Nutr. and Physiol. Symp., Fort Worth, TX. p. 239.
19. Thompson, J., D. Allyn, and **P. Miller.** 1997. Overextension of the equine distal foreleg when landing from a jump. 15<sup>th</sup> Equine Nutr. and Physiol. Symp., Fort Worth, TX. p. 27.
20. Sandberg, L., **P. Miller,** and J. Fuller. 1997. Effect of  $\beta$ -hydroxy- $\beta$ -methyl butyrate on the physiological response to exercise and conditioning in horses. J. Anim. Sci. 75 (Suppl. 1): 198.
21. **Miller, P. A.,** L. Sandberg, and J. Fuller. 1997. The effect of intensive training and  $\beta$ -hydroxy- $\beta$ -methylbutyrate (HMB) on the physiological response to exercise in horses. FASEB. 11(3):A290.
22. **Miller, P. A.** and J. Thompson. 1996. The effect of heat stabilized satin finish rice bran on nutrient digestibility and the physiological response to exercise in horses. J. Anim. Sci. 74(Supp. 1): 177.
23. **Miller, P. A.,** J. Thompson, and T. Martinez. 1995. Palatability of spray dried porcine plasma in the concentrate diet of horses. 14<sup>th</sup> Equine Nutr. and Physiol. Symp., Ontario, CA. p. 251
24. Martinez, T., **P. A. Miller,** and T. Thompson. 1995. Taurine and selected free amino acids in mares colostrum and milk with sick foals. 14<sup>th</sup> Equine Nutr. and Physiol. Symp., Ontario, CA., p. 253.
25. Martinez, T., **P. A. Miller,** and J. Thompson. 1995. Taurine and selected amino acids in colostrum and milk of mares with clinically normal foals. 14<sup>th</sup> Equine Nutr. and Physiol. Symp., Ontario, CA., p. 254.
26. Hayes, C. J., L. L. Timms, and **P. Miller.** 1995. Dynamics of intramammary infections and milk composition across lactation in mares. Dairy Research Report. DSL-57.
27. **Miller, P. A.,** J. Thompson and T. Martinez. 1994. Effect of yeast culture on the physiological response to submaximal exercise in horses. J. Anim. Sci. 72(Supp. 1):252.
28. Sime, D. M., **P. A. Miller,** and R. L. Engen. 1994. Effect of furosemide and phenylbutazone on arterial blood gases and blood metabolites during exercise in the horse.
29. J. Anim. Sci. 72(Supp. 1):77.

#### **Non-refereed journal articles, newsletters, and conference proceedings in technical, semi-technical, and popular publications**

1. **Auwerda, P.** 2020. [Design, Update and Maintain Online Iowa Horse Judges Directory.](#)
  - a. 2021 - 83 Judges in the Directory
2. **Auwerda, P.,** B. Lang, and S. Barnhart. 2020. [Forages for Horses in Iowa](#)
3. **Auwerda, P.** 2020. [Water Quality for Horses](#)
4. **Auwerda, P.** 2020. [Digestive Anatomy and Physiology of the Horse](#)
5. **Auwerda, P.** 2020. [Protein and the Horse's Diet](#)
6. **Auwerda, P.** 2020. [Rotational Grazing for Horses](#)



7. Auwerda, P. 2020. [Iowa Equine Industry and Coronavirus Resources](#)
8. Auwerda, P. and M. Schultz. 2020. [Successful Women Managing Horses Program](#)
9. Auwerda, P. 2020. [Feeding fat \(oil\) to horses](#)
10. Auwerda, P. 2019. [Design, Update and Maintain Online Iowa Horse Judges Directory.](#)
  - a. Total 96 Judges in the Directory
11. Auwerda, P. 2020. [The Extravaganza](#)
12. Auwerda, P. 2019. [Feeding fat \(oil\) to horses](#)
13. Auwerda, P. 2019. [Energy, Feed Ingredients and the Horse](#)
14. Auwerda, P. 2019. [Fiber and the Horse](#)
15. Auwerda, P. 2019. [Castration Lab](#)
16. Auwerda, P. 2019. [Prepare Your Horses and Facilities for Winter](#)
17. Auwerda, P. 2019. [2020 Equine Extravaganza](#)
18. Auwerda, P. 2019. [Develop a Pasture Management Calendar](#)
19. Auwerda, P. 2019. [Iowa State Fair 4-H Horse Show](#)
20. Auwerda, P. 2019. [ANS216 Equine Reproduction Lab 2019](#)
21. Auwerda, P. 2019. [Animal Science 4-H Horse Roundup](#)
22. Auwerda, P. 2019. [How Many Horses Can Your Pasture Maintain?](#)
23. Auwerda, P. 2019. [Life Cycle of the Mosquito](#)
24. Auwerda, P. 2019. [Soil Tests](#)
25. Auwerda, P. 2019. [Preparing for the Rain, Standing Water and Mud](#)
26. Auwerda, P. 2019. [Horse Pasture Management](#)
27. Auwerda, P. 2019. [Iowa Equine Needs Assessment Survey Results](#)
28. Auwerda, P. 2019. [2019 Iowa Horse Judges Certification Clinic](#)
29. Auwerda, P. 2019. [Congratulations Story County Hippology & Quiz Bowl](#)
30. Auwerda, P. 2019. [4-H Horse and Pony ID](#)
31. Auwerda, P. 2019. [Preparing for Hippology](#)
32. Auwerda, P. 2019. [Preparing for Quiz Bowl](#)
33. Auwerda, P. 2018. [Iowa Equine Needs Assessment Survey](#)
34. Auwerda, P. 2018. [4H Horse and Pony ID](#)
35. Auwerda, P. 2018. [AHCF Announces Results of 2017 Economic Impact Study](#)
36. Auwerda, P. 2018. [What is Horsebowl?](#)
37. Auwerda, P. 2018. [Area Youth Earn Top Honors at Western National Roundup](#)
38. Ferwerda, N. and P. Auwerda. 2018. [ISU Equine Farm Stands Excellent Stallions](#)
39. Auwerda, P. 2018. [Make Sure Horses Have Water in the Winter](#)
40. Auwerda, P. 2018. [Lighting Programs for Mares](#)
41. Auwerda, P. 2018. [2019 Iowa Horse Judges Application](#)
42. Ferwerda, N. and P. Auwerda. 2018. [Equine Reproduction... We're Not Horsing Around!](#)
43. Auwerda, P. 2018. [Iowa State University Equine Teaching Program](#)
44. Auwerda, P. 2018. [The Body Condition Score](#)
45. Auwerda, P. 2018. [Fencing for Horses](#)
46. Auwerda, P. 2019. [Resources for Horse Judges](#)
47. Auwerda, P. 2018. [Measurement Procedure for Horses and Ponies](#)
48. Auwerda, P. 2018. [Does my equine need to wear a grazing muzzle?](#)
49. Auwerda, P. 2018. [Feeding the Senior Horse](#)
50. Auwerda, P. 2018. [Electric Fencing for Rotational Grazing](#)
51. Auwerda, P. 2018. [Selecting the Proper Bit](#)
52. Auwerda, P. 2018. [Horses are Part of Agritourism](#)
53. Auwerda, P. 2018. [History of the Iowa State University Horse Barns on Campus](#)
54. Auwerda, P. 2018. [Protection From Barn Fires](#)
55. Miller-Auwerda, P. 2015. Winter Care of Horses. Small Farm Sustainability Newsletter. ISU
56. Miller-Auwerda, P. and N. Ferwerda. 2015. Equine Program Review. Iowa State University Animal Industry Report.
57. Miller-Auwerda, P. 2014. Equine Herpes Virus. Grazing News. April.
58. Miller-Auwerda, P. 2014. Biosecurity. Grazing News. April.
59. Miller-Auwerda, P. and N. Ferwerda. 2014. Equine Program Review. Iowa State University Animal Industry Report. A.S. Leaflet R2889
60. Miller-Auwerda, P. 2013. Iowa Horse Judges Directory.

61. **Miller-Auwerda, P.** 2013. How Many Hours Per Year Should You Work for a Horse Business? *Grazing News*.
62. **Auwerda, P.** 2012. Take Care of Your Horses in the Heat. *Grazing News*. July.
63. **Miller-Auwerda, P.** 2012. Protein Requirements of Horses. *Grazing News*. May.
64. **Miller-Auwerda, P.** 2012. What is Protein? *Grazing News*. March.
65. **Miller-Auwerda, P.** 2012. Hay Substitutes. *Grazing News*. January.
66. **Miller-Auwerda, P.** 2012. Iowa Ring Stewards Directory.
67. **Miller-Auwerda, P.** 2012. Iowa Horse Judges Directory.
68. **Miller-Auwerda, P.** and N. Ferwerda. 2012. Equine Program Review. Iowa State University Animal Industry Report. A.S. Leaflet R2718.
69. **Miller-Auwerda, P.** 2011. Winter Care for Horses. *Grazing News*. December.
70. **Miller-Auwerda, P.** 2011. What are You Feeding Your Horse? *Grazing News*. December.
71. **Miller-Auwerda, P.** 2011. The Body Condition Score. *Grazing News*. November.
72. **Miller-Auwerda, P.** 2011. The Digestive System. *Grazing News*. October.
73. Stevenson, M. and **P. Miller-Auwerda**. The Future of Teaching and Research in Companion Animal Biology in Departments of Animal Science. 2011. *Grazing News*. October.
74. **Miller-Auwerda, P.** 2011. Total Mixed Ration Balancing. *Grazing News*. September.
75. **Miller-Auwerda, P.** 2011. Heat Stroke. *Grazing News*. August.
76. **Miller-Auwerda, P.** 2011. Hot Weather Care. *Grazing News*. August.
77. **Miller-Auwerda, P.** 2011. Is Your Horse Allergic to an Allergen in the Environment? *Grazing News*. July.
78. **Miller-Auwerda, P.** 2011. Equine Herpes Virus. *Grazing News*. June.
79. **Miller-Auwerda, P.** 2011. Insect Pest Management. *Grazing News*. June.
80. **Miller-Auwerda, P.** 2011. Strangles. *Grazing News*. May.
81. **Miller-Auwerda, P.** 2011. The Sacrifice Area. *Grazing News*. March.
82. **Miller-Auwerda, P.** 2011. Frost Seeding. *Grazing News*. March.
83. **Miller-Auwerda, P.** 2011. Gestation and Foaling. *Grazing News*. January.
84. **Miller-Auwerda, P.** 2011. Common Steps to Understanding Horse Behavior. *Progressive Cattleman*. January.
85. **Miller-Auwerda, P.** 2011. Iowa Horse Judges Directory.
86. **Miller-Auwerda, P.** 2011. Iowa Ring Stewards Directory.
87. **Miller-Auwerda, P.** 2011. 2010 Review – ISU Equine Teaching and Extension. Iowa State University Animal Industry Report.
88. **Miller-Auwerda, P.** 2010. Insulating Properties of Hair. *Grazing News*. December.
89. **Miller-Auwerda, P.** 2010. Preparing the Mare for the Breeding Season. *Grazing News*. December.
90. **Miller-Auwerda, P.** 2010. The Fire Extinguisher. *Grazing News*. December.
91. **Miller-Auwerda, P.** 2010. Winter Care of Horses. *Grazing News*. November.
92. **Miller-Auwerda, P.** 2010. Understanding Horse Behavior, Part 4. *Grazing News*. November.
93. **Miller-Auwerda, P.** 2010. Understanding Horse Behavior, Part 3. *Grazing News*. October.
94. **Miller-Auwerda, P.** 2010. Horse Management: Carcass Disposal. *Grazing News*. October.
95. **Miller-Auwerda, P.** 2010. Understanding Horse Behavior, Part 2. *Grazing News*. September.
96. **Miller-Auwerda, P.** 2010. Understanding Horse Behavior, Part 1. *Grazing News*. August.
97. **Miller-Auwerda, P.** 2010. Hot Weather Care. *Grazing News*. July.
98. **Miller-Auwerda, P.** 2010. Heat Stroke. *Grazing News*. July.
99. **Miller-Auwerda, P.** 2010. Iowa Horse Judges Directory.
100. **Miller-Auwerda, P.** 2010. Horses are Part of Agritourism. *Grazing News*. June.
101. **Miller-Auwerda, P.** 2010. Fencing. *Grazing News*. June.
102. **Miller-Auwerda, P.** 2010. Purchasing a Horse: Questions to Ask. *Grazing News*. February.
103. **Miller-Auwerda, P.** 2010. Iowa Ring Stewards Directory.
104. **Miller-Auwerda, P.** and C. Burris. 2010. 2009 Review – ISU Equine Teaching and Extension. Iowa State University Animal Industry Report. A.S. Leaflet R2534.
105. Benton, J., **P. M. Auwerda**, C. Youngs and L. Evans. 2010. Induction of Ovulation and LH Response in Cyclic Mares Treated with Gonadorelin Diacetate Tetrahydrate. Iowa State University Animal Industry Report. A.S. Leaflet R2535.
106. **Miller-Auwerda, P.** 2009. The Arena Surface. *Grazing News*. September.
107. **Miller-Auwerda, P.** 2009. Fall Hazards. *Grazing News*. September.
108. **Miller-Auwerda, P.** 2009. Iowa Horse Judges Directory.
109. **Miller-Auwerda, P.** 2009. Iowa Ring Stewards Directory.

110. **Miller-Auwerda, P.** and N. Ferwerda. 2009. Equine Program Review. Iowa State University Animal Industry Report. A.S. Leaflet R2718.
111. **Miller-Auwerda, P.** and the State 4H Equine Advisory Committee. 2009. Horse and Pony Identification Form.
112. **Miller-Auwerda, P.** 2008. Iowa Horse Judges Directory.
113. **Miller-Auwerda, P.** 2008. Visually Evaluating Hay. *Grazing News*. August.
114. **Miller-Auwerda, P.** 2008. Trail Riding Tips for the Road. *Grazing News*. August.
115. **Miller-Auwerda, P.** 2008. Horse Hay. *Grazing News*. June.
116. **Miller-Auwerda, P.** 2008. What are You Feeding? Sampling and Analyzing Hay. *Grazing News*. June.
117. **Miller-Auwerda, P.** and D. Otto. 2007. Iowa Horse Industry Impacts State Economy. *The Horse*.
118. **Miller-Auwerda, P.** 2007. Iowa Horse Judges Directory.
119. **Miller-Auwerda, P.** and the State 4-H Equine Advisory Committee. 2007. Rules and Regulations for 4H Equine Shows in Iowa. 4H-511C.
120. **Miller-Auwerda, P.** 2007. Pest Control. *Grazing News*. June.
121. **Miller-Auwerda, P.** 2007. Horse Show Checklist. *Grazing News*. June.
122. **Miller-Auwerda, P.** 2007. Arena Etiquette. *Grazing News*. June.
123. **Miller-Auwerda, P.** 2006. Iowa Horse Judges Directory.
124. **Miller-Auwerda, P.** 2006. Iowa Horse Care.
125. **Miller-Auwerda, P.** and D. Otto. 2006. The Iowa Equine Industry – The Billion Dollar Facts.
126. **Miller-Auwerda, P.** and D. Otto. 2006. Economic Importance of Iowa's Equine Industry.
127. **Miller-Auwerda, P.** 2005. Iowa Horse Judges Directory.
128. **Miller-Auwerda, P.** 2004. Iowa Horse Judges Directory.
129. **Miller-Auwerda, P.** 2005. Accidents and Causes. *Grazing News*. June.
130. **Miller-Auwerda, P.** 2004. Equine Program. Iowa State University Animal Industry Report. A.S. Leaflet R1928.
131. Booth, J., H. Tyler, **P. M. Auwerda**, and J. Moore. 2004. Soybean Hulls as an Alternative Feed for Horses. A.S. Leaflet R1931.
132. **Miller-Auwerda, P.** 2004. First-Aid for Horses. *Grazing News*. November.
133. **Miller-Auwerda, P.** 2004. Selecting Hay for Your Horse. *Grazing News*. June.
134. **Miller-Auwerda, P.** 2004. Bit Terminology. *Grazing News*. June.
135. **Miller-Auwerda, P.** 2003. Iowa Horse Judges Directory.
136. **Miller-Auwerda, P.** 2003. Suggestions and Guidelines for Winter Horse Care. *Grazing News*. November.
137. **Miller-Auwerda, P.** 2003. Horse Show Management Guidelines. *Grazing News*. June.
138. **Miller-Auwerda, P.** 2003. Safety at Horse Shows. *Grazing News*. June.
139. **Miller-Auwerda, P.** 2003. Pasture Management. *Grazing News*. February.
140. **Miller-Auwerda, P.** and State 4H Advisory Committee. 2003. Horseless Horse Project. 4H 513.
141. **Miller-Auwerda, P.** 2002. Iowa Horse Judges Directory.
142. **Miller-Auwerda, P.** and the State 4H Equine Advisory Committee. 2002. Horse and Pony Project Worksheet.
143. **Miller-Auwerda, P.** 2001. Iowa Horse Judges Directory.
144. **Miller, P.** 2001. Preparing the mare for the breeding season. *The Iowa Horse*.
145. **Miller-Auwerda, P.** 2000. Iowa Horse Judges Directory.
146. **Miller, P.** 2000. What is exercise physiology? *The Iowa Horse*.
147. **Miller-Auwerda, P.** 1999. Iowa Horse Judges Directory.
148. **Miller, P.** 1998. Iowa Horse Judges Directory.
149. Pasture Management Guide for Livestock Producers. 1998. PM-1713.
150. **Miller, P.** 1998. Aging the Horse. *The Working Horse*.
151. **Miller, P.** 1998. Care of the Older Horse. *The Iowa Horse*.
152. **Miller, P.** 1997. Iowa Horse Judges Directory.
153. **Miller-P.** and the State 4H Equine Advisory Committee. 1997. A 4-H Guide for Equine Shows in Iowa. Iowa State University Extension. 4H 511-C (revised).
154. **Miller, P.** 1997. Abnormal Equine Behavior: Vices. Part 1. *Iowa Horse*. 11(1):8-9.
155. **Miller, P.** 1997. Abnormal Equine Behavior: Vices. Part 2. *Iowa Horse*. 11(2):12.
156. **Miller, P.** 1997. Forage and Concentrate – Meeting the Horse's Nutrient Requirements. 11(5):7-8.
157. **Miller, P.** 1997. Locating a Horse To Buy. *The Iowa Horse*. 11(2):13.
158. **Miller, P.** 1997. Calcium and Phosphorus – Two Important Minerals For The Horse. *Working Horse*.
159. **Miller, P.** 1997. Conformation and Soundness. *Working Horse*.

160. **Miller, P.** 1997. Adding Energy to Your Horse's Diet. Working Horse.
161. **Miller, P.** 1997. Nutrition for the Growing Horse. Working Horse.
162. **Miller, P.** 1997. Forage & Concentrate – Meeting The Horse's Requirement. Working Horse.
163. **Miller, P.** 1997. Vitamin E and Horses. Working Horse.
164. **Miller, P.** 1997. Vitamins for the Horse. Working Horse.
165. **Miller, P.** 1997. Supplements and Cost: Is The Supplement You Are Feeding Cost Effective For Your Horse? Working Horse.
166. **Miller, P.** 1997. Winter Horse Care. Working Horse.
167. **Miller, P.** 1997. Fescue Toxicosis: A Problem for Mares. *Horsepower*.
168. **Miller, P.** 1996. Iowa Horse Judges Directory.
169. **Miller, P.** 1996. Hyperplastic Goiter. *Horsepower*.
170. **Miller, P.** 1996. What Are The Problems Involved In Breeding an Older mare? *Horsepower*.
171. **Miller, P.** 1996. Selenium: Balance Between Deficiency And Excess In The Diet Is Required. The Iowa Horse.
172. **Miller, P.** 1996. What Is A Curbed Hock And What Are Its Limitations As It Relates To A Hunter/Jumper Prospect? *Horsepower*.
173. **Miller, P.** 1996. Developing an Outdoor Arena. *Horsepower*.
174. **Miller, P.** 1996. Pasture for Horses. The Iowa Horse.
175. **Miller, P.** 1995. Iowa Horse Judges Directory.
176. **Miller, P. A.** 1995. Selenium: Balance Between Deficiency and Excess In The Diet Is Required. The Iowa Horse. Iowa Horse Industry Council.
177. **Miller, P.A.** 1995. Body Condition Score. The Iowa Horse. Iowa Horse Industry Council.
178. **Miller, P.A.** 1995. Barn Fire Prevention Checklist. The Iowa Horse. Iowa Horse Industry Council.
179. **Miller, P.** 1994. Iowa Horse Judges Directory.
180. **Miller, P. A.** 1994. Safety On and Around Horses. Iowa Horse Industry Council News.
181. **Miller, P.A.** 1994. New Horse Owners Manual.
182. **Miller, P.A.** 1994. Evaluating Commercial Feed Mixes. Iowa Horse Industry Council News.

## **Newsletters**

Grazing News, an on-line equine newsletter

*Grazing News was started in 1997 as Iowa 4-H Equine News. Originally to get the newsletter to 4-H families, HorsePower, a magazine, would send it out with a copy of their magazine to 15,000 subscribers. There were a couple of years after HorsePower went out of business that the newsletter was not published. The newsletter started up again with the ease of sending newsletters on-line. Currently Grazing News has evolved into a monthly newsletter and is designed and sent via Constant Contact. Dr. Auwerda is the editor. She writes numerous articles for the newsletter.*

1. **Auwerda, P.** 2020. Grazing News. January-December
2. **Miller-Auwerda, P.** 2019. Grazing News. January-December
3. **Miller-Auwerda, P.** 2018. Grazing News. January-December
4. **Miller-Auwerda, P.** 2017. Grazing News. August-December
5. **Miller-Auwerda, P.** 2016. Grazing News. January – July
6. **Miller-Auwerda, P.** 2015. Grazing News. January-December
7. **Miller-Auwerda, P.** 2014. Grazing News. January-December
8. **Miller-Auwerda, P.** 2013. Grazing News. January-December
9. **Miller-Auwerda, P.** 2012. Grazing News. January-December
10. **Miller-Auwerda, P.** 2011. Grazing News. January-December
11. **Miller-Auwerda, P.** 2010. Grazing News. January-December
12. **Miller-Auwerda, P.** 2009. Grazing News. June, August, November
13. **Miller-Auwerda, P.** 2008. Grazing News. June, August, November
14. **Miller-Auwerda, P.** 2007. Grazing News. June, August, November
15. **Miller-Auwerda, P.** 2006. Grazing News. June, August, November
16. **Miller-Auwerda, P.** 2005. Grazing News. June, August, November
17. **Miller-Auwerda, P.** 2004. Grazing News. June, August, November
18. **Miller-Auwerda, P.** 2003. Grazing News. June, August, November
19. **Miller-Auwerda, P.** 2002. Grazing News. June, August, November
20. **Miller-Auwerda, P.** 2001. Grazing News. June, August, November

21. **Miller-Auwerda, P.** 2000. Grazing News. June, August, November
22. **Miller-Auwerda, P.** 1999. Grazing News. June, August, November
23. **Miller-Auwerda, P.** 1998. Grazing News. June, August, November
24. **Miller-Auwerda, P.** 1997. Grazing News. June, August, November

## **Extension Related Presentations**

### **Regional, National & International Presentations**

1. **Auwerda, P.** Spring 2016. Equine Behavior. Master Equine Manager I.
2. **Auwerda, P.** Spring 2016. Equine Nutrition. Master Equine Manager I.
3. **Auwerda, P.** Spring 2016 Equine Quality Assurance. Master Equine Manager I.
4. **Auwerda, P.** Fall 2015. Equine Behavior. Master Equine Manager I.
5. **Auwerda, P.** Fall 2015. Equine Nutrition. Master Equine Manager I.
6. **Auwerda, P.** Fall 2015. Equine Quality Assurance. Master Equine Manager I.
7. **Auwerda, P.** Spring 2015. Equine Behavior. Master Equine Manager I.
8. **Auwerda, P.** Spring 2015. Equine Nutrition. Master Equine Manager I.
9. **Auwerda, P.** Spring 2015. Equine Quality Assurance. Master Equine Manager I.
10. **Auwerda, P.** Fall 2014. Equine Behavior. Master Equine Manager I.
11. **Auwerda, P.** Fall 2014. Equine Nutrition. Master Equine Manager I.
12. **Auwerda, P.** Fall 2014. Equine Quality Assurance. Master Equine Manager I.
13. **Auwerda, P.** Spring 2014. Equine Behavior. Master Equine Manager I.
14. **Auwerda, P.** Spring 2014. Equine Nutrition. Master Equine Manager I.
15. **Auwerda, P.** Spring 2014. Equine Quality Assurance. Master Equine Manager I.
16. **Auwerda, P.** Fall 2013. Equine Behavior. Master Equine Manager I.
17. **Auwerda, P.** Fall 2013. Equine Nutrition. Master Equine Manager I.
18. **Auwerda, P.** Fall 2013. Equine Quality Assurance. Master Equine Manager I.
19. **Miller-Auwerda, PM,** H. Bender and K. Merkies. 2016. Thinkspace 2.0 an open source for collaborative learning and blended learning spaces. University of Guelph, Guelph, ON, Canada. NAEAA.
20. **Auwerda, PM,** C Skelly, G Shelle, K. Anderson, KL Waite, KL Martinson. 2015. Evaluating knowledge gained through quizzes in an online employer training program for horse Industry professionals.
21. Anderson, K., Skelly, C., Martinson, K. L., Waite, K. L, **Auwerda, P.** and Heyboer, G. 2013. Simultaneous multi-state equine business education program. Journal of Equine Veterinary Science. 33:389..
22. **Auwerda, P.** 2012. Senior Equine Management Course Uses ThinkSpace to Develop Business and Facility Management Project. Teaching and Learning in the Animal Sciences. Madison, WI.
23. **Auwerda, P.** 2012. ThinkSpace – An Innovative Approach to a Current Issues and Business Management Project in a Senior Level Equine Systems Management Course. National Association Equine Affiliated Academics. Billings, MT.
24. **Miller-Auwerda, P.** 2012. Your Horse Operation: Business or Hobby? eXtension HorseQuest Youtube. <http://www.youtube.com/watch?v=u5bCVjAUSCk&feature=g-all-u>
25. **Auwerda, P.** 2012. Promotion, Marketing and Advertising. Equine Business Conference. North Central Region. Broadcast from Ames, IA.
26. **Auwerda, P.** Spring 2012. Equine Behavior. Master Equine Manager I.
27. **Auwerda, P.** Spring 2012. Equine Nutrition. Master Equine Manager I.
28. **Auwerda, P.** Spring 2012. Equine Quality Assurance. Master Equine Manager I.
29. **Auwerda, P.** Fall 2011. Equine Behavior. Master Equine Manager I.
30. **Auwerda, P.** Fall 2011. Equine Nutrition. Master Equine Manager I.
31. **Auwerda, P.** Fall 2011. Equine Quality Assurance. Master Equine Manager I.
32. **Auwerda, P.** Spring 2011. Equine Behavior. Master Equine Manager I.
33. **Auwerda, P.** Spring 2011. Equine Nutrition. Master Equine Manager I.
34. **Auwerda, P.** Spring 2011. Equine Quality Assurance. Master Equine Manager I.
35. **Miller-Auwerda, P.** and G. Dahlke. 2010. Relevant Equine Intensive Nutrition Software. Midwest Animal Science. Des Moines, IA.
36. **Auwerda, P.** Fall 2010. Equine Behavior. Master Equine Manager I.
37. **Auwerda, P.** Fall 2010. Equine Nutrition. Master Equine Manager I.
38. **Auwerda, P.** Fall 2010. Equine Quality Assurance. Master Equine Manager I.
39. **Auwerda, P.** Spring 2010. Equine Behavior. Master Equine Manager I.
40. **Auwerda, P.** Spring 2010. Equine Nutrition. Master Equine Manager I.
41. **Auwerda, P.** Spring 2010. Equine Quality Assurance. Master Equine Manager I.

42. **Miller-Auwerda, P.** 2010. Equine Nutrition. Equine Nutrition On-Line. Ames, IA.
43. **Auwerda, P.** Fall 2009. Equine Behavior. Master Equine Manager I.
44. **Auwerda, P.** Fall 2009. Equine Nutrition. Master Equine Manager I.
45. **Auwerda, P.** Fall 2009. Equine Quality Assurance. Master Equine Manager I.
46. **Auwerda, P.** Spring 2009. Equine Behavior. Master Equine Manager I.
47. **Auwerda, P.** Spring 2009. Equine Nutrition. Master Equine Manager I.
48. **Auwerda, P.** Spring 2009. Equine Quality Assurance. Master Equine Manager I.
49. **Miller-Auwerda, P.** Nutrition for the competition horse, 2008. Invited. Region 6 North American Trail Ride Conference, Altoona, IA.
50. **Auwerda, P.** Fall 2008. Equine Behavior. Master Equine Manager I.
51. **Auwerda, P.** Fall 2008. Equine Nutrition. Master Equine Manager I.
52. **Auwerda, P.** Fall 2008. Equine Quality Assurance. Master Equine Manager I.
53. **Auwerda, P.** Spring 2008. Equine Behavior. Master Equine Manager I.
54. **Auwerda, P.** Spring 2008. Equine Nutrition. Master Equine Manager I.
55. **Auwerda, P.** Spring 2008. Equine Quality Assurance. Master Equine Manager I.
56. **Auwerda, P.** Fall 2007. Equine Behavior. Master Equine Manager I.
57. **Auwerda, P.** Fall 2007. Equine Nutrition. Master Equine Manager I.
58. **Auwerda, P.** Fall 2007. Equine Quality Assurance. Master Equine Manager I.
59. **Auwerda, P.** Spring 2007. Equine Behavior. Master Equine Manager I.
60. **Auwerda, P.** Spring 2007. Equine Nutrition. Master Equine Manager I.
61. **Auwerda, P.** Spring 2007. Equine Quality Assurance. Master Equine Manager I.
62. **Miller-Auwerda, P.** 2007. Current Understanding on Horse Nutrition. Invited. 3<sup>rd</sup> Kemin Science of Pet Food Symposium, Paris, France.
63. **Miller-Auwerda, P.** 2006. Using Corn Co-Products Feeds In Horse Rations. Invited. Sheldon, IA.
64. **Miller-Auwerda, P.** and M. Hall. 2005. Utilizing Undergraduate Students For Educational Programs & Promotion Of A Horse Program. 19<sup>th</sup> Equine Science Society. Tucson, AZ.
65. **Miller-Auwerda, P.** and G. Dahke. 2005. Brands for Horses – Ration and Nutritional Decision Software. 19<sup>th</sup> Equine Science Society, AZ.
66. **Miller-Auwerda, P.** 2003. Feeding Hay & Myths about Horse Nutrition. Iowa Forage and Grassland Conference. Des Moines, IA.
67. **Miller-Auwerda, P.A.** and D. Schwaab. 2002. Leadership Training Using The Iowa Communications Network. American Youth Horse Council Symposium. Raleigh, NC.
68. **Miller, P.** 1998. The Effects Of Supplemental  $\beta$ -Hydroxy- $\beta$ -Methyl Butyrate (HMB) On Training And Racing Thoroughbreds. Association for Equine Sports Medicine, Leesburg, VA.
69. **Miller, P.** 1998. Horse Housing. Wick Buildings. Council Bluffs, IA.
70. **Miller, P.** 1997. The Effect Of Intensive Training And  $\beta$ -Hydroxy- $\beta$ -Methylbutyrate (HMB) On The Physiological Response To Exercise In Horses. FASEB. New Orleans, LA.
71. **Miller, P.** 1996. Animal Science Round-Up: An Educational Tool For Youth. American Youth Horse Council Symposium. Tampa, FL., February.
72. **Miller, P.A.** and J. Thompson. 1996. The Effect Of Heat Stabilized Satin Finish Rice Bran On Nutrient Digestibility And The Physiological Response To Exercise In Horses. Annual American Society of Animal Science, SD, July.
73. **Miller, P. A.** 1996. An Overview of Horses and Related Programs in North America. Ensminger-Iowa State University Ag-Tech School. Ukraine.
74. **Miller, P. A.** 1996. Equine Exercise and Training. Ensminger-Iowa State University Ag-Tech School. Ukraine.
75. **Miller, P. A.** 1996. Nutrition and Equine Performance. Ensminger-Iowa State University Ag-Tech School. Ukraine.
76. **Miller, P.A.,** J. Thompson, and T. Martinez. 1995. Palatability Of Spray Dried Porcine Plasma In The Concentrate Diet Of Horses. 14<sup>th</sup> Equine Nutr. and Physiol. Symp., Ontario, CA. January.
77. **Miller P.A.,** J. Thompson and T. Martinez. 1994. Effect Of Yeast Culture On The Physiological Response To Submaximal Exercise In Horses. Annual American Society of Animal Science, Minneapolis, MN, July.

#### **State Producer & Youth Seminars/Extension Presentations**

1. **Auwerda, P.** 2020. Equine Nutrition. Women Managing Horses
2. **Auwerda, P.** 2020. The Horse's Welfare. AnCyAcademy
3. **Auwerda, P.** 2020. Horse Fitness for Summer. AnCyAcademy
4. **Auwerda, P.** 2019. Equine Nutrition. Women Managing Horses

5. **Auwerda, P.** 2019. Body Condition Scores and Weights in Horses. Animal Science Round-Up.
6. **Auwerda, P.** 2019. Leg Care. Animal Science Round-Up.
7. **Auwerda, P.** 2019. Digestive System. Animal Science Round-Up.
8. **Auwerda, P.** 2018. Digestive System. Animal Science Round-Up
9. **Auwerda, P.** 2018. How Much Water Does a Horse Drink? Animal Science Round-Up
10. **Auwerda, P.** 2016. Health Care. Animal Science Round-Up
11. **Auwerda, P.** 2016. Forages. Animal Science Round-Up
12. **Auwerda, P.** 2019. Equine Nutrition. Animal Science Round-Up
13. **Auwerda, P.** 2019. Equine Nutrition. Animal Science Round-Up
14. **Auwerda, P.** 2015. Equine Nutrition. Animal Science Round-Up.
15. **Auwerda, P.** 2012. Equine Nutrition. Story County 4-H Camp.
16. **Auwerda, P.** 2012. Flexion and Extension. Animal Science Round-Up.
17. **Auwerda, P.** 2012. Thermoregulation. Animal Science Round-Up.
18. **Auwerda, P.** 2011. Qualities of a Ring Steward. Ring Stewards Workshop.
19. **Auwerda, P.** 2011. Equine Nutrition. Animal Science Round-Up.
20. **Auwerda, P.** 2010. Nutrition of the Mare. Breeding Management Workshop.
21. **Auwerda, P.** 2010. Body Condition Score. Breeding Management Workshop.
22. **Auwerda, P.** 2010. Record Keeping to Enhance Reproductive Efficiency. Breeding Management Workshop.
23. **Auwerda, P.** 2010. Equine Nutrition and Feeding.
24. **Auwerda, P.** 2010. Qualities of a Ring Steward. Ring Stewards Workshop.
25. **Auwerda, P.** 2010. Conditioning Horses. Animal Science Round-Up.
26. **Auwerda, P.** 2009. The Equine Industry –Where Do We Go From Here? Breeding Management Workshop.
27. **Auwerda, P.** 2009. Record Keeping to Enhance Reproductive Efficiency. Breeding Management Workshop.
28. **Auwerda, P.** 2009. Qualities of a Ring Steward. Ring Stewards Workshop.
29. **Auwerda, P.** 2009. The Horse Industry. Horse Cruelty Investigation Workshop.
30. **Auwerda, P.** 2009. Feeding Management. Horse Cruelty Investigation Workshop.
31. **Auwerda, P.** 2009. Minimum Requirements for Horses. Horse Cruelty Investigation Workshop.
32. **Auwerda, P.** 2009. Working Safely Around Horses. Horse Cruelty Investigation Workshop.
33. **Auwerda, P.** 2009. Trailer Loading. Horse Cruelty Investigation Workshop.
34. **Auwerda, P.** 2009. Equine Behavior. Animal Science Round-Up.
35. **Auwerda, P.** 2008. Record Keeping to Enhance Reproductive Efficiency. Breeding Management Workshop.
36. **Auwerda, P.** 2008. The Horse Industry. Horse Cruelty Investigation Workshop.
37. **Auwerda, P.** 2008. Feeding Management for the Debilitated Horse. Horse Cruelty Investigation Workshop.
38. **Auwerda, P.** 2008. Body Condition Scoring. Horse Cruelty Investigation Workshop.
39. **Auwerda, P.** 2008. Horse Behavior. Horse Cruelty Investigation Workshop.
40. **Auwerda, P.** 2008. Evaluation of Feed. Horse Cruelty Investigation Workshop.
41. **Auwerda, P.** 2008. Trailer Loading. Horse Cruelty Investigation Workshop.
42. **Auwerda, P.** 2008. Equine Nutrition. Groom Elite.
43. **Auwerda, P.** 2008. Analysis of Performance. Animal Science Round-Up.
44. **Auwerda, P.** 2008. Equine Breeding Techniques. Swine-Equine Showcase.
45. **Auwerda, P.** 2007. Body Condition and Reproductive Efficiency. Breeding Management Workshop.
46. **Auwerda, P.** 2007. Breeding Contracts. Breeding Management Workshop.
47. **Auwerda, P.** 2007. Record Keeping to Enhance Reproductive Efficiency. Breeding Management Workshop.
48. **Auwerda, P.** 2007. Equine Nutrition. Groom Elite.
49. **Auwerda, P.** 2007. Feeding Management for the Debilitated Horse. Horse Cruelty Investigation Workshop.
50. **Auwerda, P.** 2007. Body Condition Scoring. Horse Cruelty Investigation Workshop.
51. **Auwerda, P.** 2007. Equine Psychology. Horse Cruelty Investigation Workshop.
52. **Auwerda, P.** 2007. Horse Handling. Horse Cruelty Investigation Workshop.
53. **Auwerda, P.** 2007. Stable Management. Horse Cruelty Investigation Workshop.
54. **Auwerda, P.** 2007. Which Bit is Right for Your Horse? Animal Science Round-Up.
55. **Auwerda, P.** Fall 2006. Equine Behavior. Master Equine Manager I.
56. **Auwerda, P.** Fall 2006. Equine Nutrition. Master Equine Manager I.
57. **Auwerda, P.** Fall 2006. Equine Quality Assurance. Master Equine Manager I.
58. **Auwerda, P.** Spring 2006. Equine Behavior. Master Equine Manager I.
59. **Auwerda, P.** Spring 2006. Equine Nutrition. Master Equine Manager I.
60. **Auwerda, P.** Spring 2006. Equine Quality Assurance. Master Equine Manager I.
61. **Auwerda, P.** 2006. Mare Nutrition. Breeding Management Workshop.

62. **Auwerda, P.** 2006. Record Keeping. Breeding Management Workshop.
63. **Auwerda, P.** 2006. Equine Nutrition. Groom Elite.
64. **Auwerda, P.** 2006. Is Your Horse Fit? Animal Science Round-Up.
65. **Auwerda, P.** 2006. What Are You Feeding Your Horse? Animal Science Round-Up.
66. **Auwerda, P.** 2005. Equine Nutrition. Master Equine Manager 1.
67. **Auwerda, P.** 2005. Equine Nutrition. Master Equine Manager 1.
68. **Auwerda, P.** 2005. Mare Nutrition. Breeding Management Workshop.
69. **Auwerda, P.** 2005. Record Keeping. Breeding Management Workshop.
70. **Auwerda, P.** 2005. Equine Nutrition. Groom Elite.
71. **Auwerda, P.** 2005. Horse Census and Economic Impact Study. 4-H Horse Leaders Training.
72. **Auwerda, P.** 2005. Managing a Horse Show. 4-H Horse Leaders Training.
73. **Auwerda, P.** 2005. Behavior 101. Animal Science Round-Up.
74. **Auwerda, P.** 2004. Mare Nutrition. Breeding Management Workshop.
75. **Auwerda, P.** 2004. Record Keeping. Breeding Management Workshop.
76. **Auwerda, P.** 2004. Equine Nutrition. Groom Elite.
77. **Auwerda, P.** 2004. Horseless Horse Project and Other Horse Project Leader Opportunities. 4-H Horse Leaders Training.
78. **Auwerda, P.** 2004. Assessment of A Horse's Condition. Animal Science Round-Up.
79. **Auwerda, P.** and R. Auwerda. 2004. Understanding Your Horse through Training. ICC. Webster County Fairgrounds. Fort Dodge. IA.
80. **Auwerda, P.** 2003. Mare Nutrition. Breeding Management Workshop.
81. **Auwerda, P.** 2003. Record Keeping. Breeding Management Workshop.
82. **Auwerda, P.** 2003. Equine Nutrition. Groom Elite.
83. **Auwerda, P.** 2003. Bits, Bits & More Bits. 4-H Horse Leaders Training.
84. **Auwerda, P.** 2003. Is Your Horse Fit? Animal Science Round-Up.
85. **Auwerda, P.** 2003. Feeding Hay & Myths About Horse Nutrition. Iowa Forage and Grassland Conference. Des Moines.
86. **Auwerda, P.** 2003. Purchasing A Horse. North Iowa Fair. Mason City, IA.
87. **Auwerda, P.** 2002. Important Points in Buying a Horse. 4-H Horse Leaders Training.
88. **Auwerda, P.** 2002. Horse Behavior. 4-H Horse Leaders Training.
89. **Auwerda, P.** 2002. Management of the Older Horse. 4-H Horse Leaders Training.
90. **Auwerda, P.** 2002. Artificial Insemination in Horses. Animal Science Round-Up.
91. **Auwerda, P.** 2002. What's For Dinner? Animal Science Round-Up.
92. **Auwerda, P.** 2002. Marketing Horses. Animal Science Round-Up.
93. **Auwerda, P.** 2002. Horse Behavior, Kent Feed Dealers, Iowa State University, Ames.
94. **Auwerda, P.** 2001. Working With A Horse Judging Team. 4-H Horse Leaders Training.
95. **Auwerda, P.** 2001. Is Your Horse Fit? Animal Science Round-Up.
96. **Auwerda, P.** 2001. Blood Volume. Animal Science Round-Up.
97. **Auwerda, P.** 2001. Collecting Stallions and Evaluating Semen. Animal Science Round-Up.
98. **Auwerda, P.** 2000. 4-H Horse Leaders Training.
99. **Auwerda, P.** 2000. Exercise Physiology. Animal Science Round-Up.
100. **Auwerda, P.** 2000. What's for Dinner? Animal Science Round-Up.
101. **Auwerda, P.** 2000. Pasture Management, Southeastern Community College. West Burlington, IA.
102. **Auwerda, P.** 2000. Purchasing a Horse, Belle Plaine, IA.
103. **Auwerda, P.** 1999. Exercise Physiology. Animal Science Round-Up.
104. **Auwerda, P.** 1999. Horse Careers. Animal Science Round-Up.
105. **Auwerda, P.** 1999. Feeds for Horses. Animal Science Round-Up.
106. **Auwerda, P.** 1998. Mare Nutrition. Equine Breeding Management Seminar.
107. **Auwerda, P.** 1998. Promoting and Advertising Horses. Animal Science Round-Up.
108. **Auwerda, P.** 1998. Exercise Physiology. Animal Science Round-Up.
109. **Auwerda, P.** 1998. Careers. Animal Science Round-Up.
110. **Auwerda, P.** 1997. Riding Lessons. Riding Seminar.
111. **Auwerda, P.** 1997. Animal Science Round-Up.
112. **Auwerda, P.** 1996. Animal Science Round-Up.
113. **Auwerda, P.** 1996. Body Conditioning Scoring in the Broodmare, Nutrition for the Broodmare. Northwest Iowa Horse Workshop. Sioux City. IA.
114. **Auwerda, P.** 1995. Broodmare Nutrition. Broodmare Management Seminar. Ames, IA.



115. **Auwerda, P.** 1995. Body Condition Scoring. Broodmare Management Seminar. Ames, IA.
116. **Auwerda, P.** 1995. Animal Science Round-Up.
117. **Auwerda, P.** 1994. Animal Science Round-Up.

#### Software Developed

1. **Miller-Auwerda, P.** and G. Dahlke. 2009. REINS – Relevant Equine Nutrition Software. (*REINS is used for teaching as well as extension programs*).
2. **Miller-Auwerda, P.** and G. Dahlke. 2005. Brands for Horses – Nutrition Software. (*Brands is the precursor for REINS*).

#### Sponsorships/Donations To Extension Program

1. Youth Events - Extravaganza (former Jamboree), 4-H Horse Judging Contests. Multiple sponsors.
2. Iowa State Fair 4-H Horse Championship Awards. Multiple donors.
3. Iowa 4-H and Youth Equine Endowment. Multiple donors.

#### Successful Funding As Primary Investigator

1. **Auwerda, P.** 2008. Mineral status and physical exercise in horses. Kemin. *Contributed 100% of grant effort. Evaluation of chromium in urine during exercise in horses.*
2. **Auwerda, P.** 2007. Assessment of *Bacillus subtilis* pb6 in equine. Kemin. *Contributed 100% of grant effort. Evaluation of Bacillus subtilis PB6 during exercise in horses. Presented at 3<sup>rd</sup> Kemin Science of Pet Food Symposium, Paris, France.*
3. **Auwerda, P.** and D. Otto. 2004-2005. Iowa horse power: an equine inventory, economic and demographic characteristics of Iowa's equine industry. Various Donors. *Contributed 100% of grant effort. Evaluation of Iowa Horse Industry economics.*
4. **Auwerda, P.** 2005. Glycemic index comparison of Kent feeds in horses. Kent Feeds. *Contributed 100% of grant effort. Evaluation of glucose index in response to various Kent feeds.*
5. **Auwerda, P.** 2004. Diamond V hindgut modifier for horses. Diamond V. *Contributed 100% of grant effort. Evaluation of the digestibility of yeast in the hindgut of the horse. Presented at 19<sup>th</sup> Equine Nutrition and Physiology Society meeting.*
6. **Miller, P.** 1998-1999. Effect of Horse-bac liquid on nutrient digestibility, gut physiology and the physiological response to exercise horses. TransAgra International, Inc. *Contributed to 100% of grant effort. Evaluation of Horse-Bac liquid on the digestibility and physiological response to exercise. Presented at 17<sup>th</sup> and 18<sup>th</sup> Equine Nutrition and Physiology Society meeting.*
7. **Miller, P.** 1997. Effect of  $\beta$ -hydroxy- $\beta$  methyl butyrate on racing performance in thoroughbred race horses. Metabolic Technologies, Inc. *Contributed 100% of grant effort. Evaluation of  $\beta$ -hydroxy- $\beta$  methyl butyrate in race horses at Prairie Meadows racetrack, Altoona, IA. Presented at 1998 Association for Equine Sports Medicine meeting.*
8. **Miller, P.** 1996. The effect of intensive training and  $\beta$ -hydroxy- $\beta$ -methylbutyrate (HMB) on the physiological response to exercise in horses. Metabolic Technologies, Inc. *Contributed 100% of grant effort. Evaluation of  $\beta$ -hydroxy- $\beta$  methyl butyrate on the physiological response to controlled treadmill exercise. Presented at 1998 Animal Science meeting.*
9. **Miller, P.** 1997. Dietary yeast supplementation in gestating mares. Diamond V, Inc. *Contributed 100% of grant effort. Evaluation of nutrient digestibility in gestating mares.*
10. **Miller, P.** 1995. Effect of Satin Finish on nutrient digestibility and the physiological response to exercise in horses. Dry Creek Trading, Inc. *Contributed 100% of grant effort. Evaluation of Satin Finish in exercising horses and the digestibility of Satin Finish.*
11. **Miller, P.** 1995. Effect of yeast culture and dietary fat on the physiological response to exercise in horses. Diamond V, Inc. *Contributed 100% of grant effort. Evaluation of Diamond V yeast culture on digestibility of fat in the horse's ration*
12. **Miller, P.** 1995. Physiological response to exercise and diet in the horse. U.S. Department of Agriculture, State Agricultural Experiment Station. *Contributed 100% of grant effort. Evaluation of chromium in urine during exercise in horses.*
13. **Miller, P.** 1994. Effect of yeast culture on the physiological response to submaximal exercise in the horse. Diamond V, Inc. *Contributed 100% of grant effort. Evaluation of the digestibility of nutrients in response to feeding yeast culture in exercising horses.*

## Successful Competitive Funding As Co-Principle Investigator

1. Skelly, C., G. Shelle, K. Waite, R. Showerman, K. Anderson, and **P. Auwerda**. 2015. Developing and Delivering an Online Introduction to Horse Management Course. Michigan Alliance for Animal Agriculture
2. Anderson, K., C. Skelley, K. Martinson, **P. Auwerda**, K. Waite, and G. Heyboer. 2012-2013. Improving hiring practices and retention of the horse industry labor force through traditional and on-line employer training programs. North Central Risk Management Education Center. *Contributed 25% of grant effort. Dr. M. Auwerda would be responsible for working with speakers from CALT and marketing the program in Iowa*
3. Miller, D. and **Auwerda, P.** 2011. Master Equine Manager. Excellence in Extension. *Contributed 50% of grant effort. Development of promotional materials for the Master Equine Manager program*
4. Anderson, K., C. Skelley, K. Martinson, **P. Auwerda**, K. Waite, and G. Heyboer. 2011. Keeping your equine business a vibrant part of rural communities. North Central Regional Center for Rural Development. *Contributed 25% of grant effort. Four state (IA, MI, MN, NE) program where each site contributed 25%. At each site a business related speaker transmitted on-line to the other 3 sites and questions and answers followed. Each of the sites had a different speaker.*
5. Davis, E., L. Booth and **P. Miller**. 1994. Effect of proximal check ligament desmotomy and exercise on the healing of core lesions in the superficial digital flexor tendon of performance horses. USDA Formula Funding. *Contributed 25% of grant effort. Utilized Animal Science horses and facilities and worked with the project to help evaluate the horses*

## Professional Service

### Offices And Committees In Scientific Or Professional Organizations

1. National Association Equine Affiliated Academics – Chair Employer Survey (2015)
2. Midwest Animal Science Meetings – Equine Committee Chair (2012, 2016)
3. Midwest Animal Science Meetings – Equine Committee (2009-2014)
4. Equine Science Society, Board Member (1999-2002)
5. American Society of Animal Science, Equine Program Chair (1999)
6. Equine Science Society, Nutrition Program Chair (1999)
7. Iowa Horse Council Board Member (1990-2009), (2012-2014)
8. Iowa Horse Council President (1996-1998, 2001-2004)
9. Iowa Horse Council Treasurer (1992-1995)
10. Iowa Horse Council Education Chair (2000-2009)
11. NCR-136 Equine Research Chair (1995-1996)

### Reviewer Responsibilities For Scientific Journals

1. Animal Science Image Gallery (2003)
2. FASS Level 1 Horse Training Module (1998)
3. ARPAS (1998-2000)
4. The Cornell Veterinarian (1995)
5. Journal Equine Veterinary Science (1995-2000)
6. Journal of Animal Science (1990-2011)
7. Equine Nutrition and Physiology Society (1995-2000)
8. American Youth Horse Council's Horse Industry Handbook (1996)

### Other Professional Service

1. University of Wisconsin River Falls Equine Program Review (2013)
2. Chair Ellsworth Community College, Iowa Falls, IA Equine Program Review (2011)
3. American Youth Horse Council – Horse Industry Handbook Committee (2001)
4. Equine Nutrition and Physiology Society - Nutrition Committee (1995-1999)
5. North Central Regional 4-H Equine Curriculum Development Committee (1994)

### Institutional Service

#### 1. Departmental Activities

- a. Curriculum Committee (2015-2016)
- b. Advisors Committee (2012-2013)
- c. Electronic Teaching Materials, Facilities and Equipment (2012-2016)

- d. Farm User Committee (2008-2010)
  - e. Block and Bridle Horse Interest Chair (1989-2010, 2012)
  - f. Block and Bridle Horse Show Chair (1990-2013)
  - g. Scholarship Committee Chair (2001-2003)
  - h. Scholarship Committee (1990-2009)
  - i. Iowa 4-H Animal Science Roundup Equine Chair (1990-2009, 2012-2015, 2017-2020)
  - j. Academic Quadrathlon (1990-2000) (2017-2020)
  - k. Midwest Academic Quadrathlon (1990-2000)
  - l. National ASAS Meeting Committee
  - m. Search Committee for Animal Science Department Head, Behavior Specialist, Equine Farm Manager
- 2. College of Agriculture Activities**
- a. Acreage Living Editorial Board (2009-2012)
  - b. Recruitment committee (1997-1999)
  - c. Minority student programs
  - d. Scholarship committee
- 3. University Activities**
- a. ThinkSpace Committee (2013-2016)
  - b. Equestrian Club Advisor (1989-1994, 2013-2016)
  - c. Outdoor teaching laboratories (1990-2000)
  - d. Child Care Committee (1993-1998)