**Graduate Seminar** – Rob Maddock, Coordinator

**Speaker:** Leslie Lekatz, ANSC Graduate Student

**Topic:** Encouraging Education through Engagement: A Brief Look Into Meeting the Future Demands for STEM Professionals

Leslie is originally from Ely, Minnesota. She received a B.S. degree in Biology from Bemidji State University and an M.S. degree in Reproductive Physiology from NDSU working under the direction of Dr. Kim Vonnahme. Leslie is currently completing her Ph.D. degree in Reproductive Physiology with Dr. Vonnahme.

**Speaker:** Arshi Reyaz, ANSC Graduate Student

**Topic:** Influence of Maternal Nutrient Restriction and Realimentation on Placental Vasoreactivity in Response to Angiotensin II and Bradykinin in Pregnant Beef Cows

Arshi came to the United States in 2008. She received her undergraduate degree in biotechnology and microbiology from NDSU. She is currently pursuing her M.S. degree in reproductive physiology under the guidance of Dr. Kim Vonnahme.

**Date/Time:** Friday, March 22, 2013; 3:00-4:00 p.m.

**Location:** Hultz 104
**Recent Publications**

Effect of maternal activity during gestation on maternal behavior, fetal growth, umbilical blood flow, and farrowing characteristics in pigs  
E.K. Harris, E.P. Berg, E.L. Berg, and K.A. Vonnahme  
[http://www.journalofanimalscience.org/cgi/content/abstract/91/2/734](http://www.journalofanimalscience.org/cgi/content/abstract/91/2/734)

National Beef Tenderness Survey–2010: Warner-Bratzler shear force values and sensory panel ratings for beef steaks from United States retail and food service establishments  
[http://www.journalofanimalscience.org/cgi/content/abstract/91/2/1005](http://www.journalofanimalscience.org/cgi/content/abstract/91/2/1005)

Maternal nutritional plane and selenium supply during gestation impact visceral organ mass and intestinal growth and vascularity of neonatal lamb offspring  
[http://www.journalofanimalscience.org/cgi/content/abstract/jas.2012-5953v1](http://www.journalofanimalscience.org/cgi/content/abstract/jas.2012-5953v1)

**Routine Minor Repair or Service on State Fleet Vehicle**

Motor Pool has reminded us that you should use the credit card that comes in the key packet for minor repair purchases on state fleet vehicles you have checked out. You should put the receipt for the item in the key packet when you return the vehicle. They will not reimburse you for items purchased on your personal credit card in the future. The following is taken from the North Dakota State Fleet Services Policy Manual – 2012:

*For minor repair or service work that costs $200 or less (ex: fan belt, flat tire, wash job, wiper blades, headlights, radiator hose, oil change, air filter, etc.), all receipts must be turned in to the local NDDOT shop supervisor or sent directly to State Fleet Services. Indicate method of payment, State Fleet vehicle number and odometer reading on receipt.*

You are also reminded that texting, reading, eating, and smoking are prohibited while operating a state fleet vehicle.

**Midwest ASAS Results** – Greg Lardy

NDSU Animal Sciences had a good showing at the Midwest ASAS meetings held in Des Moines last week. Following are highlights.

**Zach Carlson**, a junior from Stanchfield, MN, was awarded 1st place in the undergraduate poster competition for his poster entitled, “Effect of corn processing and distiller’s grains inclusion on intake, rumination, and resting time of finishing steers fed a high concentrate diet.” **Arshi Reyaz** was awarded 2nd place in the M.S. poster competition for her poster entitled, “Nutrient restriction during early and mid-gestation followed by realimentation alters caruncular arterial vasoreactivity in response to bradykinin in beef cows.” **Ely Camacho** was awarded 1st place in the Ph.D. poster competition for her poster entitled, “Effects of maternal nutrient restriction followed by realimentation during early to mid-gestation on conceptus development in beef cows.”

**Ligia Prezotto** completed her term as Graduate Student Director.

Twenty-two papers with authors or co-authors with current or former NDSU affiliations were presented. The complete list is attached to the newsletter.

**Tim Loy**, MS, ’01, received the Outstanding Early Career Agribusiness Award. Tim is employed by Adams Land and Cattle Company, Broken Bow, NE, where he is the Director of Nutrition and External Feeding. Dr. Loy is responsible for research and development efforts in the areas of animal health, production efficiency, carcass optimization, food safety, and data analysis. He also oversees and directs the growth of cattle finishing operations, cattle backgrounding operations, and is responsible for nutrition and feeding programs at the company’s finishing lots.

Tim is shown here with Terry Klopfenstein from the University of Nebraska – Lincoln who advised both Tim and Greg Lardy during their Ph.D. programs.

Tim and his wife Jodi reside in Broken Bow with their four children.
Academic Quadrathlon team members Zachary Carlson; Rachael Lagein, a junior from Rock Lake, ND; Taylor Cymbaluk, a senior from Crookston, MN; and Blaine Novak, a sophomore from Fordville, ND, placed 4th in the oral presentation, 6th in the written test (3rd on the nutrition test), 9th in the quiz bowl, and 10th in the lab practical. There were 16 teams competing from the Midwest and West Virginia.
We welcome with love,  
our new blessing, a gift from above!  

Arthur Borges Dahlen  
joined us on March 16, 2013 at 8:52pm  
9lb 9oz and 22 1/4 inches long.  
Proud parents, Roberta & Carl Dahlen
NDSU Animal Sciences Papers Presented at 2013 ASAS Meetings


- Effect of melatonin (MEL) or maternal nutrient restriction on cell proliferation in the ovine placenta. A.W Eifert1,*, M.E Wilson1, K.A Vonnahme2, P.P. Borowicz2,3, D.A Redmer2,3, S. Dorsam2, J. Haring2, C.O Lemley4,1 Animal and Nutritional Sciences, West Virginia University, Morgantown, 2Animal Science, 3Advanced Imaging and Microscopy Core Lab, North Dakota State University, Fargo, ND, 4Animal and Dairy Sciences, Mississippi State University, MS.

- Finishing beef cattle on totally mixed and self-fed rations. C.L. Engel1,*,V.L. Anderson1, B.R. Ilse2,1 Carrington Research Extension Center, North Dakota State University, NE, Carrington, 2Big Horn County, Montana State University, Hardin, MT.

- Effects of maternal metabolizable protein supplementation during late gestation on wether offspring organ weights. M. Van Emon1,*, C. Schauer2, A. Meyer3, K. Maddock-Carlin1, K. Vonnahme3, 1Department of Animal Sciences, North Dakota State University, Fargo, ND, 2Hettinger Research Extension Center, North Dakota State University, Hettinger, ND, 3Department of Animal Science, University of Wyoming, Laramie, WY.

- Comparison of liver and jejunal mass and energy use between high and low efficiency steers. L. Prezotto1,*, F.E. Doscher1, S. I. Paisley2, K.C. Swanson1, A.M. Meyer1,1Animal Science, North Dakota State University, Fargo, ND, 2Animal Science, University of Wyoming, Laramie, WY.

- Effects of rumen-protected arginine supplementation and arginine-HCl injection on site and extent of digestion, ruminal fermentation, and intestinal amino acid disappearance in forage-fed steers. A.M. Meyer1,*, S.I. Klein2, M. Kapphahn2, D.V. Dhuyvetter3, R.E. Musser4, J.S. Caton2,1Department of Animal Science, University of Wyoming, Laramie, WY, 2Department of Animal Sciences, North Dakota State University, Fargo, ND, 3Ridley Block Operations, 4SODA Feed Ingredients, LLC, Mankato, MN.

- Evaluation of field pea forages in growing and finishing feedlot rations. V. Anderson1,*, B. Ilse2,1 Carrington Research Extension Center, North Dakota State University, Carrington, ND, 2Big Horn County Extension, Montana State University, Hardin, MT.

- Pancreatic enzyme activity in high and low efficiency steers. F. Doscher1,*, L. Prezotto1, S. Paisley2, A. Meyer2, K. Swanson1,1Animal Science, North Dakota State University, Fargo, ND, 2Animal Science, University of Wyoming, Laramie, WY.

- Influence of increasing supplementation of corn dried distiller’s grains with solubles to growing steers fed medium-quality hay on growth performance, feeding behavior, and blood metabolites. A. Islas*, R.S. Goulart, T.C. Gilbery, M. Bauer, K.C. Swanson, Animal Science, North Dakota State University, Fargo, ND.

- Influence of nutrient restriction and melatonin supplementation of pregnant ewes on maternal and fetal pancreatic β-cell morphology. F. Doscher1,*, C. Lemley4, L. Camacho1, P. Borowicz2, J. Caton1, A. Meyer3, K. Vonnahme1, K. Swanson1,1Animal Science, North Dakota State University, Fargo, ND, 2Animal Science, Mississippi State University, MS, 3Animal Science, University of Wyoming, Laramie, WY.

• Influence of corn processing and distiller’s grains inclusion for finishing cattle on feeding behavior, gain efficiency, and carcass quality. A. Islas*, T.C. Gilbery, M.L. Bauer, K. Swanson, Animal Science, North Dakota State University, Fargo.

• Pork Quality: 2012 National Retail Benchmarking Study. B.T. Klinkner1,*, D.S. Buchanan1, C.C. Carr2, R.B.A. Dahlen1, R.J. Delmore3, K. Grimshaw4, W.R. Henning5, R.K. Miller4, S.J. Moeller6, H.N. Zerby6, D.J. Newman1, 1Animal Sciences, North Dakota State University, Fargo, ND, 2Animal Sciences, University of Florida, Gainesville, FL, 3Animal Sciences, California Polytechnic State University, San Luis Obispo, CA, 4Animal Sciences, Texas A&M University, College Station, TX, 5Dairy and Animal Sciences, the Pennsylvania State University, University Park, PA, 6Animal Sciences, the Ohio State University, Columbus, OH.

• Correlation of jejunal vascularity with feed efficiency and angiogenic factor mRNA expression in calves from a gestational nutrient restriction model. H.C. Cunningham1,*, R.D. Yunusova2, M. Du1, B.W. Hess1, J.S. Caton2, A.M. Meyer1, 1Department of Animal Science, University of Wyoming, Laramie, WY, 2Department of Animal Sciences, North Dakota State University, Fargo, ND.

• P112 (PHY) Nutrient restriction during early and mid-gestation followed by realimentation alters caruncular arterial vasoreactivity in response to bradykinin in beef cows. A. Reyaz3,*, M.S. Sane2, F. Yao2, L.E. Camacho1, C.O. Lemley3, J.S. Haring1, K.C. Swanson1, S.T. O’Rourke2, K.A. Vonnahme1, 1Department of Animal Sciences, 2Department of Pharmaceutical Sciences, North Dakota State University, Fargo, ND, 3Department of Animal and Dairy Sciences, Mississippi State University, Starkville, MS.

• Effects of maternal nutrient restriction followed by realimentation during early to mid-gestation on conceptus development in beef cows. L.E. Camacho1,*, C.O. Lemley3, K.C. Swanson1, K.A. Vonnahme1, 1Department of Animal Sciences, North Dakota State University, Fargo, ND, 2Department of Animal and Dairy Sciences, Mississippi State University, MS.

• Effect of corn processing and distiller’s grains inclusion on intake, rumination, and resting time of finishing steers fed a high concentrate diet. Z.E. Carlson*, A. Islas, R.S. Goulart, T. Gilbery, M.L. Bauer, K.C. Swanson, Animal Science, North Dakota State University, Fargo, ND.

• Cow Herd Appraisal Performance Software (CHAPS): Improving beef production from conception to carcass. J. Ramsay*, L. Tisor, W. Ottmar, P. Ashley, K. Ringwall, Dickinson Research Extension Center, North Dakota State University, Dickinson, ND.

• Proteomic analysis of fetal ovine skeletal muscle as influenced by maternal metabolizable protein supplementation in isocaloric diets during late pregnancy. C.A. Schwartz1,*, K.A. Vonnahme1, C.S. Schauer2, S.M. Lonergan3, K.J. Grubbs3, J.B. Shabb4, W.W. Muhonen4, W.L. Keller1, K.R. Maddock-Carlin1, 1Department of Animal Sciences, North Dakota State University, Fargo, ND, 2Hettinger Research Extension Center, North Dakota State University, Hettinger, ND, 3Department of Animal Science, Iowa State University, Ames, 4Department of Biochemistry and Molecular Biology, University of North Dakota, Grand Forks, ND.
• Carcass characteristics and beef tenderness differences in cattle qualified as kosher and non-kosher. K. Sorensen1,*, K. Maddock-Carlin1, N. Hayes1, W. Keller1, K. Phelps2, C. Schwartz1, R. Maddock1, 1North Dakota State University, Fargo, ND, 2Kansas State University, Manhattan, KS.

• Lactate concentration at exsanguination is related to feedlot heifer temperament but not fresh beef color. K. Wellnitz*, J. Magolski, K. Carlin, V. Anderson, E. Berg, Animal Sciences, North Dakota State University, Fargo, ND.

• Inclusion of condensed corn distillers solubles in beef cattle diet affects sustainability in terms of cultural energy use efficiency. H. Koknaroglu1,*, T. Akunal1, O. Koskan1, F.E. Doscher2, M.P. Hoffman3, 1Animal Science Department, Suleyman Demirel University, Isparta, Turkey, 2Animal Science Department, North Dakota State University, Fargo, 3Animal Science Department, Iowa State University, Ames.