**Zachary Mason**

Wise Center Room 4046, Mailstop 9815

Starkville, MS 39762

(603) 991-6747

zm290@msstate.edu

**Education:**

**Current**  Mississippi State University, College of Agriculture and Life Sciences, Starkville, Masters of Science in Animal and Dairy Sciences

3.42 GPA

**May, 2012** Cornell University, College of Agriculture and Life Sciences, Ithaca, NY

Bachelors of Science in Animal Science

Dean’s List 2010 and 2011

3.24 GPA

**RESEARCH EXPERIENCE:**

**2015-Present Graduate Research Assistant**, Mississippi State University, Starkville, MS, under the co-mentorship of Dr. Stephanie Ward and Dr. Brian Rude

**Thesis Project:** “Analysis of Producer Surveys and Herd Production Data in Assessing the Efficacy of Heat Abatement Practices in Reducing Somatic Cell Count in the Southeastern United States”

• Building skills in MS Excel and various procedures of SAS V. 9.4 (primarily GLM and CORR)

• Presently preparing initial analysis for conference meetings

**Non-Thesis Projects:**

• Lead investigator on a 60 day feeding and growth trial in late-pregnant dairy replacements

•Leadership skills in areas of project management such as scheduling, team work and delegation

• Planned experimental procedure

• Assisted other graduate students on four other feeding trials

• Experience with tail bleeding and body condition scoring

• Routinely hand fed experimental diets to cows via Calan gates

• Collected and weighed back orts

• Fed neonate Holstein calves on a 1-X growth trial

• Monitored calf morbidity

**2013 Research Assistant, Purdue University**, West Lafayette, IN, Under the mentorship of Dr. B. T. Richert

• Processed 300+ feed, orts, fecal and urine samples for energy content via bomb calometry

• Collected data with MS Excel and Logger Pro V. 3.8.4

• Wrote an abstract and presented findings at the fellowship conference

**2011** **Undergraduate Researcher**, Full-Feed Growth Field Trial at Northwinds Farm, North Stratford, NH, With the guidance of Dr. W. Burhans (Dairy Tech Group) and Dr. M.E. Van Amburgh (Cornell University)

• Designed a field trial to test the efficacy of accelerated feeding programs in Jersey calves

• Devised and executed protocols

• Collected intake and growth data and recorded using MS Excel

**Teaching/Academic Mentorship Experience:**

**2016** Mentor for Learning Ally College Success Program

**2016** Teaching Assistant-Companion Animal Biology, Mississippi State University, Starkville, MS

**2015** Wrote questions and tested undergraduates on their knowledge of livestock breeds, Academic Quadrathalon, Mississippi State University, Starkville, MS

**2015** Guest Lecturer- Dairy Herd Management, Mississippi State University, Starkville, MS

**2011** Teaching Assistant-Integrated Cattle Nutrition, Cornell University, Ithaca, NY

**2010** Teaching Assistant-Introductory Animal Nutrition, Cornell University, Ithaca, NY

**Management Experience:**

**2015-Present** **As a Graduate Student with a Disability**

• Monitored the progress and provided quality control for producing post-secondary educational materials in an alternative format (Braille)

• Wrote bids for contracts to custom transcribers for translating graduate-level course material into alternative media (Braille, tactile graphic, audio, e-text)

• Educated faculty about the use of auxiliary aids and services permitted in the classroom for students with disabilities under Section 504 of the Rehabilitation Act of 1973 and Title II of the Americans with Disabilities Act of 1990

**2008-2012** **As an Undergraduate Student with a Disability**

• Monitored the progress and provided quality control for producing post-secondary educational materials in an alternative format (Braille)

• Managed 2-5 student employees on a weekly basis

**NON-ACADEMIC WORK EXPERIENCE:**

**May 2015** **Policy Intern**, National Association of State Departments of Agriculture, Arlington, VA**-Aug. 2015** •

• Monitored Congressional listings for relevant hearings, e.g. (WOTUS, FISMA, HPAI, etc.)

• Summarized congressional summaries and reports on topics for staff to aid in discussions with state commissioners, directors and secretaries of agriculture, e.g. (EPA ozone regulation, livestock greenhouse gas emissions, the VFD)

•Directed calls, attended and summarized congressional hearings, and aided staff and members as needed.

• Organized NASDA’s contribution to a co-hosted ice cream social for D.C. agricultural policy interns

**2008-2014** **Assistant Shepherd and Young Stock Manager** - Northwinds Farm, N. Stratford, NH

• Fed, bedded and monitored health of dairy replacements, ewe flock and lamb crops

• Adjusted and implemented feeding, inventory and wash protocols

• Assisted in the management of grouping livestock

• In 2013, created a spreadsheet lambing season record system and feed inventory database

**2011 Intern** - Dairy-Tech Group, Twin Falls, ID

• Accompanied supervisor to client dairies

• Learned on-farm critical control points for diet analysis and wet calf rearing

• Participated in formulation of rations

**Unpublished Raw Data:**

Jones, A. J.; Kelly, D. T.; **Mason, Z. A**.; Radcliffe, J. S.; and Richert, B. T. 2013. Impact of Dietary Crude Protein and Supplemental Amino Acids on Gross Energy of Fresh Excrement from Nursery and Finishing Swine: Environmental Implications. Abstract. Purdue University, West Lafayette, IN

**Mason, Z. A**.; Burhans, B.; and Van Amburgh, M. E. 2011. Observations on three different intake allowances during the milk fed stage in Jersey calves. Northwinds Farm, N. Stratford, NH

**Literature Reviews:**

**Mason, Z. A**. and Murphey, S. C. 2010. A Review of Contemporary and Currently Researched Methods of Milk Sanitation. Cornell University, Ithaca, NY

**Mason, Z. A**. and Brady, J. W. 2012. Validation of the Results of Tailford et al. (2003) ‘A casein variant in cow’s milk is atherogenic.’ Cornell University, Ithaca, NY

Ananth, D.; **Mason, Z. A**.; Nitjarunkul, P.; and Moraru C. I. 2012. Applications of Microfiltration in the Dairy Industry. Cornell University, Ithaca, NY

**CASE STUDY:**

**Mason, Z. A.** 2012. “Simulation of Four Grouping and Stocking Density Strategies in a Mixed Bedded Pack and Free Stall Facility”. Management Report. Northwinds Farm, N. Stratford, NH

**FELLOWSHIPS:**

**2013** Institute for Accessible Science Summer Undergraduate Research Fellowship, Purdue University West Lafayette, IN

**Honors AND AWARDS:**

**2015** Selected for National Association of State Departments of Agriculture Summer Internship, Arlington, VA

**2014**  Selected to Empowering Blind Students in Science and Engineering Workshop, Seattle, WA

**2011** Youth Production Award - New England Jersey Breeders’ Association

**2011** Silver Award - North East Dairy Challenge

**2011** Samuel Stewart Essay Award - Cornell University Ithaca, NY

**2010 - 2011** American Dairy Science Association award

**PRESENTATIONS:**

**Mason, Z. A.** 2016. Local Regulation of the Mammary Gland by Insulin-like Growth Factor-I: Its Application in Increased Milking Frequency in Early Lactation. Departmental Seminar, Mississippi State University, Starkville, MS.

**Mason, Z. A**. and Ward, S. H. 2016. Impact of a brewer’s yeast supplement on performance of gravid Holstein heifers. In preparation for the Masters of Science thesis proposal, Mississippi State University, Starkville, MS.

Jones, A. J.; Kelly, D. T.; **Mason, Z. A**.; Radcliffe, J. S.; and Richert, B. T. 2013. Impact of Dietary Crude Protein and Supplemental Amino Acids on Gross Energy of Fresh Excrement from Nursery and Finishing Swine: Environmental Implications. Summer Research Opportunity Program Oral Presentations, Purdue University, West Lafayette, IN.

Ananth, D.; **Mason, Z. A**.; Nitjarunkul, P.; and Moraru, C. I. 2012. Applications of Microfiltration in the Dairy Industry. Unit Operations and Dairy Foods Processing Final Class Presentation, Cornell University, Ithaca, NY.

**POSTER PRESENTATIONS:**

Jones, A. J.; Kelly, D. T.; **Mason, Z. A.**; Radcliffe, J. S.; and Richert, B. T. 2013. Impact of Dietary Crude Protein and Supplemental Amino Acids on Gross Energy of Fresh Excrement from Nursery and Finishing Swine: Environmental Implications. Summer Research Opportunity Program Oral Presentations, West Lafayette, IN

**Mason, Z. A.**; O’Connell-Avery, N. S. and Boisclair, Y., R. 2012. The Importance and Content of Omega-3 and Omega-6 Polyunsaturated Fatty Acids in Human Breast Milk. Biology of the Mammary Gland in Health and Disease Final Exam, Cornell University, Ithaca, NY

**Professional MEMBERSHIPS:**

**2015-Present** American Dairy Science Association, Graduate Student Member

**2015-Present** National Federation of the Blind

**2014-Present** New Hampshire Farm Bureau

**2014-2015** New Hampshire Coos County Young Farmer (Chairman)

**2013-2015** New Hampshire State Young Farmers Committee

**Community Outreach:**

**2014** **New England Young Farmer Summer Games** Committee Chairman

**2013-2015**  **Early Risers 4-H Beef, Dairy and Sheep** Project Leader

**2013 & 2014** Moderator for the **Coos County** **4-H Dairy** Quiz Bowl

**2012** Chaperone for the **American Jersey Cattle Association National Convention**

**University CLUBS AND ORGANIZATIONS:**

**2015-Present** Mississippi State University Graduate Student Association

**2008-2012** Cornell Dairy Science Club

**2009-2012** Cornell Cheese Club

**2010-2012** Cornell Dairy Fellows

**2009-2011** Alpha Zeta

**2011** Co-Chairman for the Cornell Biannual AG-Day

**2011** Dairy Chairman - Cornell Block and Bridle

**2010** Cornell Staff Writer - Daily Sun Science Section

**PROFESSIONAL LICENSES:**

**2016** Mississippi State University Graduate Teaching Classroom Certification

**2012** NY Dairy Animal Care and Quality Assurance Training - Certificate of Completion

**2012** Cornell Dairy and Juice HACCP Short Course - Certificate of Completion

**2009 and 2011** Cornell Artisanal Cheese Workshop - Certificate of Completion