

KENNETH D CASEY

Texas A&M AgriLife Research
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PRESENT POSITION

Associate Professor of Air Quality Engineering

EDUCATION

- University of Kentucky (2005) – Ph.D. (Biosystems and Agricultural Engineering)
- Clemson University (1992) - Master of Science (Agricultural Engineering)
- University of Southern Queensland, Aust (1986) - Graduate Diploma in Information Processing
- University of Southern Queensland, Aust (1981) - Bachelor of Engineering (Agricultural)

WORK EXPERIENCE

- Associate Professor, Texas A&M AgriLife Research, Amarillo, TX (2011 - current)
- Assistant Professor, Texas AgriLife Research, Amarillo, TX (2005-2011)
- Research Specialist, University of Kentucky, Lexington, KY (2001-2005)
- Principal Environmental Engineer, Department of Primary Industries, Toowoomba, QLD (1995 - 2001)
- Agricultural Engineer, Department of Primary Industries, Toowoomba, QLD (1981 – 1995)

AREAS OF INTEREST

Air quality. Gaseous and odor emissions from livestock operations. Environmental impact of livestock waste management systems. Wastewater treatment. Nutrient management. Livestock manure management and processing (physical, chemical and biological processes).

MAIN RESEARCH PROJECTS

- Greenhouse gas emissions from beef cattle feedyards
- Pollutant emissions from intensive livestock facilities

PROFESSIONAL REGISTRATION

Registered Professional Engineer in Queensland. Registration No: 2922.

PROFESSIONAL SOCIETIES

- American Society of Agricultural Engineers
- American Society Heating, Refrigerating and Air-Conditioning Engineers
- Air & Waste Management Association
- Clean Air Society of Australia and New Zealand
- American Society of Agronomy
- Soil Science Society of America

INTERNATIONAL EXPERIENCE

Worked for 20 years in Australia (1981 – 2001) as an extension engineer on functional design of agricultural buildings and environmental control, then as a research engineer and program leader on environmental management issues for intensive animal production systems.

PUBLICATIONS LIST (Selected)

PEER REVIEWED JOURNALS

- Parker D. B., H. M. Waldrip, K. D. Casey, B. L. Woodbury, M. J. Spiels, K. Webb and W. M. Willis. 2018. How do temperature and rainfall affect nitrous oxide emissions from open-lot beef cattle feedyard pens? *Transactions of the ASABE* 61(3):1049-1061. doi: 10.13031/trans.12788
- Parker, D. B., K. D. Casey, R. W. Todd, H. M. Waldrip, G. Marek, B. W. Auvermann, T. Marek, K. Webb, W. Willis, B. Pemberton, and B. Meyer. 2017. Improved chamber systems for rapid, real-time nitrous oxide emissions from manure and soil. *Transactions of the ASABE* 60(4): 1235-1258. doi:10.13031/trans.12151
- Waldrip, H. M., K. D. Casey, R. W. Todd, and D. B. Parker. 2017. Nitrous oxide emissions from Southern High Plains beef cattle feedyards: Measurement and modelling. *Transactions of the ASABE* 60(4): 1209-1221. doi:10.13031/trans.12085
- Sharma, S., N. Rajan, S. Cui, K. D. Casey, S. Ale, R. Jessup, and S. Maas. 2017. Seasonal variability of evapotranspiration and carbon exchanges over a biomass sorghum field in the Southern US Great Plains. *Biomass and Bioenergy* 105, 392-401. doi:10.1016/j.biombioe.2017.07.021
- Parker, D. B., H. M. Waldrip, K. D. Casey, R. W. Todd, W. M. Willis, and K. Webb. 2017. Temporal nitrous oxide emissions from beef cattle manure following a simulated rainfall event. *Journal of Environmental Quality* 46(4): 733-740. doi:10.2134/jeq2017.02.0042
- Shreck, A. L., P. J. Ebert, E. A. Bailey, J. S. Jennings, K. D. Casey, B. E. Meyer, and N. A. Cole. 2017. Effects of energy supplementation on energy losses and nitrogen balance of steers fed green-chopped wheat pasture I: Calorimetry. *Journal of Animal Science* 95(5) 2133-2143. doi:10.2527/jas.2017.1417
- Waldrip, H. M., R. W. Todd, D. B. Parker., N. A. Cole, C. A. Rotz, and K. D. Casey. 2016. Nitrous oxide emissions from open-lot cattle feedyards: A review. *Journal of Environmental Quality* 45(6): 1797–1811. doi:10.2134/jeq2016.04.0140
- Todd, R. W., N. A. Cole, R. G. Hagevoort, K. D. Casey, B. W. Auvermann. 2015. Ammonia losses and nitrogen partitioning at southern High Plains open lot dairy. *Atmospheric Environment* 110: 75-83. doi:10.1016/j.atmosenv.2015.02.069
- Parker, D., J. Ham, B. Woodbury, L. Cai, M. Spiels, M. Rhoades, S. Trabue, K. Casey, R. Todd, and A. Cole. 2013. Standardization of Flux Chamber and Wind Tunnel Flux Measurements for Quantifying Emissions from Area Sources. *Atmospheric Environment* 66: 72-83. doi:10.1016/j.atmosenv.2012.03.068
- Todd, R. W., N. A. Cole, D. B. Parker, M. B. Rhoades, and K. D. Casey. 2011. Daily, monthly, seasonal and annual ammonia emissions from southern High Plains cattle feedyards. *Journal of Environmental Quality* 40(4): 1090-1095. doi:10.2134/jeq2010.0307
- Todd, R. W., N. A. Cole, K. D. Casey, R. Hagevoort, and B. W. Auvermann. 2011. Methane emissions from southern High Plains dairy wastewater lagoons in summer. *Animal Feed Science and Technology*. 166-167: 575-580. doi:10.1016/j.anifeedsci.2011.04.040
- Casey, K. D., R. S. Gates, R. C. Shores, E. D. Thoma, and D. B. Harris. 2010. Ammonia emissions from a U.S. broiler house – Comparison of concurrent measurements using three different technologies. *Journal of the Air & Waste Management Association* 60(8): 939-948. doi:10.3155/1047-3289.60.8.939
- Gates, R. S., K. D. Casey, E. F. Wheeler, H. Xin and A. J. Pescatore. 2008. U.S. broiler ammonia emissions inventory model. *Atmospheric Environment* 42(14): 3342-3350. doi:10.13031/2013.27784