

Jourdan M. Bell

Assistant Professor and Agronomist
Texas A&M AgriLife Extension and Research
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Education

- Ph.D.** Soil Science, Texas A&M Univ., College Station, TX (May 2014)
Dissertation: *Responses of Sorghum Rooting Systems to Spatio-Temporal Dynamics of Soil Water in a Semi-Arid Environment*
- M.S.** Plant, Soil, and Environmental Science, West Texas A&M Univ., Canyon, TX (2000)
Thesis: *Changes in Soil Properties and Enzymatic Activities Following Manure Applications to a Rangeland*
- B.S.** General Agriculture, West Texas A&M Univ., Canyon, TX (1997)

Appointment

Assistant Professor and Agronomist, 70% Extension/30% Research, Feb 2014 – Present,
Department of Soil and Crop Sciences, Texas A&M University

Program overview

My Extension and Research efforts focus on agronomic management to improve crop production and profitability on the Texas High Plains. Extension activities include assisting County Extension Agents with demonstration trials as well as compiling and presenting results for regional producers through trial reports and county programs. Research activities target varietal selection as well as changing agronomic practices in sorghum (grain and forage), wheat, cotton, and corn systems on the Texas High Plains as a result of declining regional groundwater levels. I also evaluate herbicide efficacy in corn and sorghum production with a special emphasis on herbicide residual effects and rotational restrictions. Specific research activities target water stress in dryland and irrigated corn and sorghum production; and optimization of fermentation time of forage sorghums to improve varietal selection and nutritive qualities of ensiled forage sorghums.

Significant 5 year Accomplishment

I have established a comprehensive Extension and Research program through which agronomic management and inputs will be evaluated to enhance agronomic management on the Texas High Plains. In order to successfully lay the foundation for this program, I have been a member of grant teams who submitted proposals for \$1,232,185 since my hire date in February 2014. Of these proposals, \$319,720 was successfully awarded to support my program.

Refereed Publications

Schwartz, R.C., R. Baumhardt, B. Scanlon, **J.M. Bell**, R. Davis, N., Ibragimov, O. Jones, and R. Reedy. 2015. Tillage Effects on Long-Term Changes in Soil Organic Carbon 2 and Nitrogen in the Texas High Plains. *SSAJ (Accepted September 2015)*

- Brandon, R.E., Q. Xue, B.W. Bean, B.C. Blaser and **J.M. Bell**. 2015. Palmer amaranth control and grain sorghum injury with pyrasulfotole plus bromoxynil tank mixtures. (*In press*)
- Schwartz, R.C., J.J. Casanova, **J.M. Bell**, and S.R. Evett. 2013. A reevaluation of TDR propagation time estimation in soils. *Vadose Zone Journal*. 13(1)1-13. doi:10.2136/vzj2013.07.0135.
- Schwartz, R.C., T.H. Dao, and **J.M. Bell**. 2011. Manure and mineral fertilizer effects on seasonal dynamics of bioactive soil phosphorus fractions. *Agron. J.* 103(6):1724–1733.
- Schwartz, R.C., S.R. Evett, M.G. Pelletier, and **J.M. Bell**. 2009. Complex permittivity model for time domain reflectometry soil water content sensing. I. Theory. *Soil Sci. Soc. Am. J.* 73(3):896–897.
- Schwartz, R.C., S.R. Evett, and **J.M. Bell**. 2009. Complex permittivity model for time domain reflectometry soil water content sensing. II. Calibration. *Soil Sci. Soc. Am. J.* 73(3):898–909.
- Schwartz, R.C., S.R. Evett, M.G. Pelletier, and **J.M. Bell**. 2009. Complex permittivity model for time domain reflectometry soil water content sensing. I. Theory. *Soil Sci. Soc. Am. J.* 73(3):896-897.
- Schwartz, R.C., S.R. Evett, M.G. Pelletier, and **J.M. Bell**. 2009. Complex permittivity model for time domain reflectometry soil water content sensing. II. Calibration. *Soil Sci. Soc. Am. J.* 73(3):898-909.
- Dao, T.H., R.C. Schwartz, and **J.M. Bell**. 2008. Phosphorus Dynamics in Amended Soils During the Growing Season: II. Ligand Exchange and Mineralization. *Agronomy Abstracts No.* 693-7.
- Bell, J.M.**, C.A. Robinson, and R.C. Schwartz. 2006. Changes in soil properties and enzymatic activities following manure applications to a rangeland. *Rangeland Ecol. Manage.* 59:314–320.

Professional Organizations and Activities

American Society of Agronomy, ASA
Crop Science Society of America, CSSA
Soil Science Society of America, SSSA
ASA Committee Member:

2015: Leader (Jan 1, 2015 – Dec31, 2015) ASA Crop Irrigation Strategies and Management Community

Community Outreach and Service Activities

WISE (Women in Science Endeavors) Workshop Presenter (2008 – 2015)