

Seth C. Murray

*Professor and Eugene Butler Endowed Chair in Agricultural Biotechnology;
Dept of Soil and Crop Sciences, Texas A&M University / Texas A&M AgriLife Research*

Education and Training:

- **Ph.D.**, Plant Breeding and Genetics, Cornell University, Ithaca, NY, 2008
- **B. S.**, Crop and Soil Sciences, Michigan State University, East Lansing, MI, 2001
- **Crop Science exchange**, Wageningen Agricultural University, Netherlands, 2000

Professional Appointments:

- Eugene Butler Endowed Chair in Agricultural Biotechnology, April 2015 to present
- Professor, Texas A&M University, College Station, Sept. 2019
 - Associate Professor, 2014 to 2019 / Assistant Professor, Sept. 2008 to 2014
- Senior Advisor of Agricultural Systems and Technology, Office of the Chief Scientist, USDA, Sept. 2016 to Dec. 2017.

Selected Courses Taught (instructor of record 27 times):

- Quantitative Genetics in Plant Breeding (SCSC/GENE 643), 3 credits. S 2009 to present.
- Great Plains Settlement and Farming (SCSC 201), 3 credits. F 2018 to present

Selected Publications: Total peer refereed – **54**, editor refereed – **12**, abstracts – **134**, book chapters – **5**, extension publications – **9**; *graduate students in italics*; *corresponding author;

1. *Anderson, S.L., S.C. Murray**, Lonesome Malambo, *Colby Ratcliff*, Sorin Popescu, Dale Cope, Anjin Chang, Jinha Jung, and Alex Thomasson. 2019. Prediction of maize grain yield before maturity using improved temporal height estimates of unmanned aerial systems. [The Plant Phenome Journal](#). (in press) doi: 10.2135/tppj2019.02.0004
2. *Anderson, S.L., A.L. Mahan, S.C. Murray**, and P.E. Klein. (2018) Quantification of agronomic traits characterized in the four-parent maize magic population. [The Plant Genome 11: 170102](#). doi: 10.3835/plantgenome2017.11.0102
3. *Pugh, N.A.; D.W. Horne; S.C. Murray, G. Carvalho Jr, L. Malambo, J. Jung, A. Chang, M. Maeda, S. Popescu, G. Richardson, T. Chu, M.J. Starek, M.J. Brewer, and W.L. Rooney**. 2018. Temporal estimates of crop growth in sorghum and maize breeding. [The Plant Phenome Journal 1:1](#).
4. *Wahl, N., S.C. Murray**, T. Isakeit, M. Krakowsky, G. L. Windham, W.P. Williams, B. Guo, X. Ni, J. Knoll, W. Xu, B. Scully, K. Mayfield, and J. Betran. 2016. Identification of Resistance to Aflatoxin Accumulation and Yield Potential in Maize Hybrids in the Southeast Regional Aflatoxin Trials (SERAT). [Crop Science. 57: 202-215](#).
5. Shi, Y., J.A. Thomasson*, **S.C. Murray**, *N.A. Pugh, W.L. Rooney, et al.* (23 other authors). 2016. Unmanned aerial vehicles for high-throughput phenotyping and agronomic research. [PLoS ONE 11: e0159781](#).
6. Meng, Q., **S.C. Murray***, *A. Mahan, A. Collison, L. Yang, and J. Awika*. 2015. Rapid estimation of phenolic content in colored maize by near-infrared reflectance spectroscopy and its use in a breeding program. [Crop Science 55:2234-2243](#).
7. *Barerro, I.D.F., G. De La Fuente, S.C. Murray**, T. Isakeit, *P.-C. Huang, M. Warburton, M.P. Williams, M. Kolomiets, G.L. Windham* 2015. Genome wide association study for drought, aflatoxin resistance, and important agronomic traits of maize hybrids in the subtropics. [PLoS ONE 10: e0117737](#).

8. **Murray, S.C.***, P. Eckhoff, L. Wood, and A.H. Paterson. 2013. Toward rapid genetic advancement in agricultural species via cycling of gametes in vitro. [Nature Biotechnology 31, 877–880](#).
9. *Barerro, I.D.F.*, **S.C. Murray***, D. Pietsch, S. Labar. 2013. A multi-environment trial analysis of commercial maize shows a slight grain yield improvement in Texas commercial maize. [Field Crops Research 149:167-176](#).
10. Glover, J. D.*, J. P. Reganold, L. W. Bell, J. Borevitz, E. Buckler, C. M. Cox, T. S. Cox, T. E. Crews, S. W. Culman, T. Day-un, L. R. DeHaan, D. Eriksson, H. Fengyi, B. Gill, J. Holland, B. Hulke, A. Ibrahim, S. Jones, **S.C. Murray**, E. Ploschuk, E. Sacks, S. Snapp, D. Van Tassel, L. Wade, D. Wyse, and Y. Xu. 2010. Increasing food and ecosystem security on marginal lands through perennial grain breeding. [Science 328:1638-1639](#).

Selected Technology Transfer:

- Murray, S.C.*, K. Mayfield, J. Pekar, P. Brown, A. Lorenz, T. Isakeit, G. Odvody, W. Xu, J. Betran. (Approved by TAMU AgriLife plant release committee/ published in [JPR](#)). Tx741, Tx777, Tx779, Tx780 and Tx782 inbred maize lines for yield and southern US stress adaptation. *Agreements with three companies and many researchers for Tx777, Tx779*.
- Increased and donated 48 inbred lines and historical populations to [USDA-NPGS](#) repository
- First public field UAS phenotyping data set. [2017 G2F College Station](#), hosted by Cyverse.

Selected Synergistic Activities:

- Chair. Exec. Committee. Agronomic Science Foundation, ASA- CSSA-SSSA. 2019 - present
- Founder and Editor, [The Plant Phenome Journal](#), an ASA, CSSA publication. 2017- present
- Executive Committee, [North American Plant Phenotyping Network](#) (NAPPN). 2018- 2019
- Chair, Division C-1 Crop Breeding & Genetics, Crop Science Society. 2017
- Grant review panels: ARPA-e, NSF-PGRP, USDA-DOE, USDA-NIFA; ad hoc: NSF-BREAD
- Run an applied public corn breeding program focused on improving aflatoxin resistance, yield, stress resistance, and exotic introgression across the State of Texas. Developing and releasing new germplasm, inbred lines, populations and hybrid combinations.

Graduate Students: Total chair / co-chair – **30**, total committee (not chair) – **32**:

PhD: (7) finished advisor, (5) current advisor, (14) finished committee, (4) current committee

MS: (10) finished advisor, (3) current advisor, (9) finished committee, (3) current committee

Current distance students: (3) PhD chair, (1) MS, (2) PhD committee

Postdoctoral scholars (0); Visiting scholars (5) including 1 Fulbright;

Research Grant Support:

- PI/co-PI of 51 projects totaling \$10,656,075, of which \$2,098,387 are/were for Murray; 43 were external (not from Texas A&M AgriLife or TAMU).

Selected Awards:

- [Blavatnik Young Life Scientist Finalist, 2019](#)
- Fellow, Crop Science Society of America, 2018
- Dean's Outstanding Achievement Award in Interdisciplinary Research, Texas A&M, 2018
- Crop Science Society of America, Young Crop Scientist Award, 2014
- National Association of Plant Breeders Early Career Award, 2013
- Eagle Scout, Boy Scouts of America, 1998