

**Seth C. Murray**

*Professor and Eugene Butler Endowed Chair;*

*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 to present
  - Associate Professor, 2014 to 2019; Assistant Professor, Sept. 2008 to 2014
- Invited Fellow, Brussels Institute for Advanced Studies (BrIAS), Spring 2022. Belgium
- Dean's Fellow, Texas A&M College of Agriculture and Life Sciences, March 2021 to present
- Senior Advisor of Agricultural Systems and Technology, Office of the Chief Scientist, USDA, Sept. 2016 to Dec. 2017.

**Selected Courses Taught** (instructor of record in classroom courses 29 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 – **89**, editor refereed – **15**, abstracts – **174**, book chapters – **6**, extension publications – **13**; *graduate students in italics*; \*corresponding author;

1. *Alper Adak, Seth C. Murray\**, Clarissa Conrad, Yuanyuan Chen, Nithya Subramanian, Steven Anderson, Scott Wilde. 2021. Validation of Functional Polymorphisms Affecting Maize Plant Height by Unoccupied Aerial Systems (UAS) allows Novel Temporal Phenotypes. [G3: jkab075](#)
2. Lane, Holly M., *Seth C. Murray\**, Osva A. Montesinos-López, Abelardo Montesinos-López, Jose Crossa, David K. Rooney, Ivan D. Barrero Farfan, Gerald N. De La Fuente, Cristine L. Morgan. 2020. Phenomic Prediction of Maize Grain Yield from Near-Infrared Reflectance Spectroscopy of Kernels with Functional Regression Analyses. [The Plant Phenome Journal 3: e20002](#).
3. *Arnold, Robert J.\**, Alejandra Ochoa, Chris R. Kerth, Rhonda K. Miller, **Seth C. Murray**. 2019. Assessing the impact of corn variety and Texas terroir on flavor and alcohol yield in new-make bourbon whiskey. [PLoS ONE 14: e0220787](#).
4. Natalie Henkhaus, Madelaine Bartlett, David Gang, Rebecca Grumet, Elizabeth Haswell, Ingrid Jordon-Thaden, Argelia Lorence, Eric Lyons, Samantha Miller, **Seth Murray**, ...34 other authors, and David Stern\*. 2020. Plant Science Decadal Vision 2020-2030: Reimagining the Potential of Plants for a Healthy and Sustainable Future. [Plant Direct. 4: e00252](#).
5. *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](#)
6. *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.

7. 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](#).
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](#).

#### **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, licensed to one 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:**

- Incoming President Elect. Crop Science Society of America (CSSA), 2021 (President 2023)
- Chair. Exec. Committee. [Agronomic Science Foundation](#), ASA- CSSA-SSSA. 2019 - 2020
- Founder and Editor, [The Plant Phenome Journal](#), an ASA, CSSA publication. 2017 - 2021
- Executive Committee, [North American Plant Phenotyping Network](#) (NAPPN). 2018 - 2019
- Grant panels: ARPA-e, NSF-PGRP, USDA-DOE, USDA-NIFA; ad hoc: NSF-BREAD, FFAR
- 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 – **33**, total committee (not chair) – **37**:

PhD: (13) finished advisor, (4) current advisor, (18) finished committee, (3) current committee

MS: (12) finished advisor, (4) current advisor, (14) finished committee, (2) current committee

Postdoctoral scholars (1); Visiting scholars (8) including 1 Fulbright;

#### **Research Grant Support:**

- PI/co-PI of 57 projects totaling \$12,274,904, of which \$2,779,216 are/were for my program; 48 were external (not from Texas A&M AgriLife or Texas A&M University)

#### **Selected Awards:**

- Dean's Outstanding Achievement Award in Service, Texas A&M, 2022
- [Blavatnik Young Life Scientist Finalist, 2019, 2020](#)
- 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