

John M. Cason

Texas A&M AgriLife Research
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Education:

- Ph.D. – Plant Breeding, Texas A&M University, 2018
- M.S.- Agriculture, Tarleton State University, 2002
- B.S.- Animal Science, Summa cum laude, Tarleton State University, 1994

Professional History:

- 2019-Present Assistant Professor of Peanut Breeding and Genetics, Texas A&M AgriLife Research, Stephenville TX,
- 2018-2019 Senior Research Associate with PI status, Texas A&M AgriLife Research, Stephenville, TX
- 2012-2018 Senior Research Associate, Texas A&M AgriLife Research, Stephenville, TX
- 2002-2012 Research Associate, Texas A&M AgriLife Research, Stephenville, TX
- 1996-2002 Technician, Texas Agricultural Experiment Station, Stephenville, TX
- 1994-1995 Herd Manager, Vinson Ranches, Ovalo, TX
- 1993-1994 Student Worker, Texas Agricultural Experiment Station, Stephenville, TX

Current Research Activities:

- Peanut Variety development and release
- Wild species use to develop drought tolerance, disease resistance and quality traits
- Statewide breeding line trials coordination
- Data collection
- Data analysis and interpretation
- Grant preparation and submission
- Local cooperator interaction and speaking at field days and scientific meetings

Objectives and Interests:

One of my overarching goals is to serve the growers of Texas, the United States and ultimately the world through the development of superior peanut cultivars. My current research interests are focused on characterization of wild species peanut, development of wild species introgression pathways and the development and implementation of high throughput phenotyping methods for use in wild and cultivated peanut. I also am interested in speeding up current cultivated peanut breeding cycles by the implementation of genomic selection, focusing on traits such as quality characteristics, disease resistance and drought tolerance.

Awards:

- Tarleton State University Animal Science distinguished graduate, 1994
- Research Associate of the Year, Soil and Crop Science Department Texas A&M University, 2010

Membership in Professional Organizations:

- American Peanut Research and Education Society, 2011-present
- National Plant Breeders Association, 2014-present
- American Peanut Council, 2019-Present

Current and other Recent Research Grants, Contracts, Projects and Proposals:

- National Peanut Board- 2011-present, Co-PI 2018-Present \$101,000 - This grant involves the development of varieties for use by Texas Peanut producers.
- Texas Citrus Board- 2013- present \$15,000 annually- funds provided to maintain a citrus germplasm collection out of the Texas citrus production region to protect valuable germplasm from disease outbreaks.
- NPB/TPF- 2017-Present \$30,000 annually- A grant to increase and replenish wild species germplasm to the U.S. National germplasm collection.
- Hatch Project TEX09712- 2018- present PI- Breeding to improve Yield, Quality, Drought Tolerance, Pest and Disease Resistance in Peanut (*Arachis hypogaea* L.)
- National Institute of Food and Agriculture- 2017-present \$100,000 annually (\$5,000 in Stephenville) – This is a small part of a larger grant to develop drought tolerant peanut varieties for the Southwestern U.S.
- Chancellors Research Initiative- 2019- Co-PI- \$22,950 A grant to purchase Unmanned Aerial Vehicles (UAV) for High Throughput Phenotyping (HTPP) and Data Collection.
- Meadows Foundation- 2018- Co-PI- \$147,680 Proposal: Spineless Prickly Pear Cactus for Forage Production – Providing Economic Opportunity while Conserving Water.
- National Institute of Food and Agriculture- 2019- \$ 1.0 M (submitted) Co-PI Organic Agriculture Research and Extension Initiative. A grant to develop production recommendations and initiate cultivar development for organic peanut producers in Texas and New Mexico.
- Texas Genomic and Bioinformatics Seed Grant- 2016-2018 \$10,000 for sequencing cost associated with drought tolerance gene identification.
- The Peanut Foundation- 2016 \$15,000 - This grant is for the development of SNP markers to be used in the development of a population for use in the overall peanut community.

Publications:

- **J.M. Cason**, C.E. Simson, W.L. Rooney and J.A. Brady. 2019. Drought tolerant transcription factors identified in *Arachis dardani*. Agrosystems, Geosciences and Environment (In Preparation).

- **J.M. Cason**, C.E. Simpson, W.L. Rooney and J.A. Brady. 2019. First Report of successful hybridization between *Arachis vallsii* and *Arachis dardani*. Agrosystems, Geosciences and Environment (In Review).
- Burow M.D., M.R. Baring , J. Chagoya, C. Trostle, N. Puppala, C.E. Simpson, J.L. Ayers, **J.M. Cason**, A.M. Schubert, A. Muiña and Y. López. 2019. Registration of ‘TAMVal OL14’ Peanut. Journal of Plant Registrations. doi:10.3198/jpr2017-10-0073crc.
- **Cason J.M.** C.E. Simpson and J.A. Brady. 2018. Introgression Pathway for Drought Tolerance in Peanut (*Arachis hypogaea* L.) (dissertation). Texas A&M University Press.
- Simpson C.E., A. R. Custodio, L.S. Rodrigues, A. P. Penaloza, J. F. M. Valls, and **J. M Cason. 2018.** Using *Arachis Vallsii* Krapov. & W.C. Greg. as a Bridge Species for Introgression in *Arachis*. Proceedings of the 2018 American Peanut Research and Education Society.
- Chagoya, J. R. Kulkarni, M. Baring, **J. Cason** and C. Simpson. 2018. Evaluation of a Drought Tolerant, High Oleic Disease Resistant Runner Population. Proceedings of the 2018 American Peanut Research and Education Society.
- **Cason J.M.** C.E. Simpson and J.A. Brady. 2018. Introgression Pathway for Drought Tolerance in Peanut (*Arachis hypogaea* L.) (an update). Proceedings of the 2018 American Peanut Research and Education Society.
- Woodward J.E., P.A. Dotray and **J.M. Cason.** 2017. First report of *Sclerotinia minor* infecting *Eclipta prostrata* in Texas. Plant Health Progress. 18:219-220 doi:org/m.1094/pho-07-17-0041.
- **Cason J.M.** C.E. Simpson and J.A. Brady. 2017. Introgression Pathway for Drought Tolerance in Peanut (*Arachis hypogaea* L.). Departmental Seminar soilcrop.tamu.edu/media/seminar-videos.
- **Cason J.M.**, C.E. Simpson and J.A. Brady. 2017. Introgression Pathway for Drought Tolerance in Peanut (*Arachis hypogaea* L.). Proceedings of the 2017 American Peanut Research and Education Society.
- Burow, M.D., J. Chagoya, D. Bush, M.R. Baring, C.E. Simpson and **J. Cason.** 2016. Characterization of Improved Early-Maturing Peanut Breeding Lines. Proceedings of the 2016 American Peanut Research and Education Society 48:25.
- Baring, M.R., M.D. Burow, C.E. Simpson and **J.M. Cason.** 2016. Spanish-type Breeding Lines Developed in an Attempt to Transfer Resistance to Root-Knot Nematode. Proceedings of the 2016 American Peanut Research and Education Society 48:153.
- **Cason, J.M.**, C.E. Simpson and M.D. Burow, R. Chopra, D. C. Wondracek-Lüdke, A. Hillhouse. 2016. Identification of QTL for pollen stainability of F2 Lines Developed from an Interspecific Cross of *Arachis duranensis* x *Arachis cardenasii*. Proceedings for the 2016 American Peanut Research and Education Society 48:157.
- Woodward, J.E., S.A. Russell, M.R. Baring, **J.M. Cason** and T.A. Baughman. 2015. Effects of Fungicides, Time of Application and Application Method on Control of *Sclerotinia* Blight in Peanut. International Journal of Agronomy. vol. 2015 Article ID323465, 8 pages, 2015doi:10.1155/2015/323465.

- Simpson, C.E., J.F.M. Valls, **J.M. Cason** and B.D. Bennett. 2014. Cross Compatibility Studies in *Arachis* Wild Species to Identify New Species. Proceedings of the 2014 American Peanut Research and Education Society 46:34.
- **Cason, J.M.**, B.D. Bennett, C.E. Simpson and M.R. Baring. 2014. Development of an Introgression Pathway for Resistance to *Sclerotium rolfsii* Sacc. Proceedings of the 2014 American Peanut Research and Education Society v. 46.
- Burow, M.D., M.R. Baring, N. Puppala, C.E. Simpson, J.L. Ayers, **J.M. Cason**, A.M. Schubert, A. Muihia and Y. Lopez. 2014. Registration of ‘Schubert’ Peanut. Journal of Plant Registrations 8:2:122-126.
- Baring, M.R., J.N. Wilson, C.E. Simpson and **J.M. Cason**. 2013. Correlations Between Leafspot Resistance, Sclerotinia Resistance, Yield, Total Sound Mature Kernels, and O/L Values in a segregating F2 derived Peanut Population. Proceedings of the 2013 American Peanut Research and Education Society 45:38.
- C.E. Simpson, J.L. Starr, M.D. Burow, **J.M. Cason** and J.N. Wilson. 2013. Webb, a New High Oleic and Rootknot Nematode Resistant Runner Peanut. Proceedings of the 2013 American Peanut Research and Education Society 45:30.
- Baring, M.R., J.N. Wilson, M.D. Burow, C.E. Simpson, J.L. Ayers and **J. Cason**. 2013. Variability of Total Oil Content in Peanut Across the State of Texas. Journal of Crop Improvement. 27:125-136.
- Baring M.R., C.E. Simpson, M.D. Burow, **J.M. Cason** and J.L. Ayers. 2013. Registration of ‘Tamrun OL11’ Peanut. Journal of Plant Registrations 7:2:154-158.
- Simpson, C.E., J.L. Starr, M.R. Baring, M.D. Burow, **J.M. Cason** and J.N. Wilson. 2013. Webb, a New High Oleic and Rootknot Nematode Resistant Runner Peanut. Proceedings of the 2014 American Peanut Research and Education Society v.45.
- Simpson, C.E., J.L. Starr, M.R. Baring, M.D. Burow, **J.M. Cason** and J.N. Wilson. 2013. Registration of ‘Webb’ Peanut. Journal of Plant Registrations 7:3:265-268.
- **Cason, J.M.**, B.D. Bennett, and C.E. Simpson. 2011. Germination and Emergence Effects on Peanut Seed Planted Directly from Cold Storage. Proceedings of the 2011 American Peanut Research and Education Society v.43.
- Baring, M.R., J.N. Wilson, C.E. Simpson, **J. Cason**, M.D. Burow and J.L. Ayers. 2010. Variability of Total Oil Content in Peanut Across the State of Texas. Proceedings of the 2011 American Peanut Research and Education Society v. 42:50.
- Starr, J.L., M.R. Baring, C.E. Simpson and **J.M. Cason**. 2010. Multiple Disease Resistance in High O/L Peanut. Proceedings of the 2010 American Peanut Research and Education Society 42:75.
- Simpson, C.E., **J.M. Cason** and B.D. Bennett. 2010. Update on the Long-Term Storage of *Arachis* Seeds. Proceedings of the 2010 American Peanut Research and Education Society 42:84.
- **Cason, J.M.**, C.E. Simpson, J.L. Starr and M.D. Burow. 2010. Marker Assisted Selection in the transfer of Root-Knot nematode resistance in Peanut (*Arachis hypogaea* L.). Texas Journal of Science 62 (1) 49-52.
- Baring, M.R., E.M. Hawkins, J.N. Wilson, A.M. Schubert, M.D. Burow, C.E. Simpson, **J. Cason**, and J.L. Ayers. 2009. Variability of Total Oil Content in Peanut Across the State of Texas. Proceedings of the 2009 American Peanut Research and Education Society 41:76.

- Baring, M.R., C.E. Simpson, M.D. Burow, M.C. Black, **J.M. Cason** J.L. Ayers, Y. Lopez and H.A. Melouk. 2006. Registration of Tamrun OL07 Peanut. *Crop Science*, 46:6:2721-2722.
- Baring, M.A., Y. Lopez, C.E. Simpson, **J.M. Cason**, J.L. Ayers and M.D. Burow. 2006. Registration of 'Tamnut OL06' Peanut. *Crop Science*, 46:6:2720-a-2721.
- Lopez, Y., M.D. Burow, M.R. Baring, J.L. Ayers, **J. Cason** and C.E. Simpson. 2003. Determination of Maturity of Standard Varieties in West Texas. *Proceedings of the 2003 American Peanut Research and Education Society* 35:34.
- **Cason, J.M.**, C.E. Simpson, J.L. Starr, M.D. Burow and A.H. Patterson. 2001. Marker Assisted Selection in the transfer of Root-Knot nematode resistance in Peanut (*Arachis hypogaea* L.). *Proceedings of the 2001 American Peanut Research and Education Society* 33:52.
- **Cason, J.M.** 2001. Marker Assisted Selection in the transfer of Root-Knot nematode resistance in Peanut (*Arachis hypogaea* L.). A Thesis. Tarleton State University.