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# Education

Ph.D. in Crop Physiology, Department of Crop, Soil and Environmental Sciences, University of Arkansas, June 2014

M.S. in Agronomy, Department of Plant and Soil Sciences, Mississippi State University, July 2011

B.S. in Agricultural Business and Economics/minor in Agronomy in Soils, Auburn University, May 2009

# Professional Experience

2014-Present. Assistant Professor, Cotton and Small Grains Specialist. Department of Plant Sciences, University of Tennessee. Jackson, TN

2011-2014. Distinguished Doctoral Fellow. Department of Crop, Soil and Environmental Sciences, University of Arkansas. Fayetteville, AR

2009-2011. Teaching Assistant. Department of Plant and Soil Sciences, Mississippi State University. Mississippi State, MS

2008. Undergraduate Intern. Loxley Agronomy Center, Monsanto Company. Loxley, AL

2003-2009. Undergraduate Research Assistant. National Soil Dynamics Laboratory, United States Department of Agriculture- Agricultural Research Service. Auburn, AL

# College Credit Instruction

2016. *Plant Sciences 433/633*. Guest Lecturer, Field Crops Production. Instructor of record: Dr. Barbara Darroch. University of Tennessee, Martin. Martin, TN.

2014. *CSES 5013*. Guest Lecturer, Crop Physiology. Instructor of record: Dr. Derrick M. Oosterhuis. University of Arkansas, Fayetteville, AR.

2009-2011. *PSS 3301.* Lab Instructor, Basic Soils Laboratory. 1-3 sections per semester. Compliment to lecture (PSS 3303) taught by Dr. Jac J. Varco and Dr. Michael Cox. Mississippi State University, Mississippi State, MS.

2010. *ECE/FO/GR/PSS 4611/6411*. Guest Lecturer. Remote Sensing Seminar. Instructor of record: Dr. Michael Cox. Mississippi State University, Mississippi State, MS.

2009-2011. *PSS 3303*. Guest Lecturer. Basic Soils Lecture. Instructor of record: Dr. Michael Cox and Dr. Jac J. Varco. Mississippi State University, Mississippi State, MS.

# Book Chapters

**Raper, T.B.,** C. Pilon, V. Singh, J.L. Snider, S. Stewart, S. Byrd. 2019. “ Cotton Production in the United States of America: An Overview. In: Khawar Jabran (ed.) *Cotton Production*. Wiley USA. (In press)

**Raper, T.B.**, J.J. Varco & D.M. Oosterhuis. 2014. “Chapter 1: Remote Sensing for N Management.” In: Snider, J.L. & D.M. Oosterhuis (eds) *Linking Physiology to Management*. Reference Book Series 10, The Cotton Foundation, Memphis, Tennessee.

Varco, J.J., A.A. Fox, **T.B. Raper**, and K.J. Hubbard. 2013. Development of Sensor Based Detection of Crop Nitrogen Status for Utilization in Variable Rate Nitrogen Fertilization. *In* J.V. Stafford (ed.) Precision agriculture ’13. Wageningen Academic Publishers, Wageningen, Netherlands.

# Peer Reviewed Publications

**Raper, T.B.,** A.T. McClure, S. Butler, X. Yin, and R. Blair. 2019. Impacts of single- and a multiple-species cover crop on soybean relative to the wheat-soybean double crop system. Crop Forage Turfgrass Manage.: 5.180104 1-9.

**Raper, T.B.**, D. Fromme, D.M. Dodds, G. Morgan, R. Boman, S. Butler. 2019. Evaluation of early season foliar fungicide applications to support non-fungicidal ‘plant health’ benefits. J. Cotton Sci. 23: 7-13.

**Raper, T.B.,** J.L. Snider, D.M. Dodds, A. Jones, B. Robertson, D. Fromme, T. Sandlin, T. Cutts, and R. Blair. 2018. Genetic and environmental contributions to cotton yield and fiber quality in the MidSouth. Crop Sci. 59: 307-317.

Zheng, L., D.L. Boykin, J. Zhang, E. Bechere, J.K. Dever, B.T. Campbell, **T.B. Raper**, S. Hague, C. Meeks, W. Smith, G.O. Myers, and F.M. Bourland. 2018. Analysis of testing locations in Regional High Quality tests for cotton fiber quality traits. Submitted to Euphytica.

**Raper, T.B.**, D.M. Oosterhuis, and E.M. Barnes. 2016. In-season drought-stress quantification: previous approaches and future directions. Journal of Cotton Science 20:179-194.

**Raper, T.B.**, C.G. Henry, L. Espinoza, M. Ismanov, and D.M. Oosterhuis. 2015. Response of two inexpensive commercially produced soil moisture sensors to changes in water content and soil texture. Agricultural Sciences. 6: 1148-1163.

Zheng, L., B.T. Campbell, E. Bechere, J.K. Dever, J. Zhang, A.S. Jones, **T.B. Raper**, S. Hague, W. Smith, G.O. Meyers, F.M. Bourland. 2015. Genotypic and environmental effects on cottonseed oil, nitrogen, and gossypol contents in 18 years of regional high quality tests. Euphytica 1-10, DOI. 10.1007/s10681-015-1523-z.

Butler, S., H. Kelly, **T.B. Raper**, A. Cochran, S. Sandesh, K. Lamour, A. Megnistu, A. Rocha, P. Shelby, J. Jordan. 2015. First report of ‘Target Spot’ caused by *Corynespora Cassiicola’* on cotton in Tennessee. Plant Disease (in press)

**Raper, T.B.**, and J.J. Varco. 2014. Canopy-scale Wavelength and Vegetative Index Sensitivities to Cotton Growth Parameters and Nitrogen Status. Precision Agric. 15, DOI 10.1007/s11119-014-9383-4.

**Raper, T.B.**, J.J. Varco, and K.J. Hubbard. 2013. Canopy-Based Normalized Difference Vegetation Index Sensors for Monitoring Cotton Growth and Leaf Nitrogen. Agron. J. 105: 1345-1354.

Oosterhuis, D.M., D.A. Loka, and **T.B. Raper.** 2013. Potassium and Stress Alleviation: Physiological Functions and Management of Cotton. J. Plant Nutr. Soil Sci. 176: 331-343.

**Raper, T.B.,** D.M. Oosterhuis, U. Siddons, L.C. Purcell, and M. Mozaffari. 2012. Effectiveness of the Dark Green Color Index in Determining Cotton Nitrogen Status from Multiple Camera Angles. IJAST. 2: 71-74.

# Peer Reviewed Extension Publications

Duncan, L, H. Savoy, M. Essington, M. Buschermohle, S. Jagadamma, S. Hawkins, D. Tyler, R. Florence, A. McClure, **T.B. Raper,** G. Allen, D. Qualls, J. Wilson. 2019. University of Tennessee Fertilizer Recommendation development. W795.

Adkins, K., C.N. Boyer, S.A. Smith, A.P. Griffith, A. Muhammad, A. McClure, and **T.B. Raper.** 2019. Corn and cotton producers’ prevented planting decision. W820.

**Raper, T.B.,** R.H. Blair, S. Butler, D. McCurley, J.R. Buntin, P.W. Shelby, and J. Mallard. 2018. 2019 Cotton Variety Guide. W285.

Dodds, D.M., D.B. Reynolds, **T.B. Raper**, B. Robertson, T. Cutts, and T. Sandlin. 2018. 2018 Mid-South Cotton Defoliation Guide. W376.

Duncan, L.A. and **T.B. Raper.** 2018. Cotton Nitrogen Management in Tennessee. W783.

Dodds, D.M., **T.B. Raper**. 2018. 2018 Cotton Maturity Guide. Mississippi State University Extension.

Dodds, D.M., T.B. Raper. 2018. 2018 Cotton Cultivar Management. Mississippi State University Extension.

West, D., D. Kincer, R. Blair and **T.B. Raper**. 2018. Wheat Variety Performance Tests in Tennessee.

**Raper, T.B.**, R.H. Blair, S. Butler, D. McCurley, J.R. Buntin, P.W. Shelby, and J. Mallard. 2017. 2017 Cotton Variety Trial Results.

**Raper, T.B.**, R.H. Blair, S. Butler, D. McCurley, J.R. Buntin, P.W. Shelby, and J. Mallard. 2017. 2018 Cotton Variety Guide. W285

McClure, A., L. Steckel, **T.B. Raper**, V. Sykes, G. Montgomery, H. Kelly and S. Stewart. Cover crop quick facts. W 417.

Duncan, L., and **T.B. Raper**. 2017. Cotton Nitrogen Management in Tennessee. W XXX (In review).

West, D., D. Kincer, R. Blair and **T.B. Raper**. 2017. Wheat Variety Performance Tests in Tennessee.

Dodds, D.M., D.B. Reynolds, **T.B. Raper**, B. Robertson, T. Cutts, and T. Sandlin. 2017. 2017 Mid-South Cotton Defoliation Guide. W 376

**Raper, T.B.**, A.T. McClure, F. Yin, B. Brown, and H. Savoy. 2017. Sulfur and Tennessee Row Crops. W 345

**Raper, T.B.**, B. Meyer, K. Lawrence, T. Sandlin, T. Cutts, N. Silvey, C. Burmester, T. Dill, P. Shelby, and H.Y. Kelly. 2017. Verticillium wilt in Tennessee Valley Cotton. W 403

West, D., D. Kincer, R. Blair, **T.B. Raper**, G. Montgomery. 2016. Wheat Variety Performance Tests in Tennessee.

**Raper, T.B.**, R.H. Blair, S. Butler, R.C. Dunagan, D. McCurley, J.R. Buntin, P.W. Shelby, and J. Mallard. 2016. 2016 Cotton Variety Trial Results. PB1742.

**Raper, T.B.,** R.H. Blair, S. Butler, R.C. Dunagan, D. McCurley, J.R. Buntin, P.W. Shelby, and J. Mallard. 2016. 2017 Cotton Variety Guide. W285.

**Raper, T.B.**, A.T. McClure, F. Yin, B. Brown, and H. Savoy. 2016. Sulfur and Tennessee Row Crops. W345.

**Raper, T.B.,** H.Y. Kelly and F. Yin. 2016. Red cotton leaves: Causes and implications. W344.

**Raper, T.B.,** and H.Y. Kelly. 2016. Target Spot and Its Potential Impact on Tennessee Cotton. W370.

Dodds, D.M., D.B. Reynolds, L.T. Barber, & **T.B. Raper**. 2016. 2016 Mid-South Cotton Defoliation Guide. Mississippi State Extension Service. pp. 1-10.

Steckel, L. E., T. C. Mueller, M. A. Thompson, N. Rhodes, R. M. Hayes, B. Brown and **T. B. Raper**. 2016. 2017 Weed Control Manual for Tennessee Field Crops, Forage Crops, Farm Ponds and Harvest Aids. PB 1580.

West, F.L., D. Kincer, R.H. Blair, **T.B. Raper**, and G. Montgomery. 2016 Wheat Variety Performance Tests in TN. Special Report.

**Raper, T.B.** and C.O. Gwathmey. 2015. Guide to earliness management in short-season cotton production. PB1830.

**Raper, T.B.,** S.D. Stewart, and B. Barker. 2015. Growing cotton in the garden: Current legislation. W330.

**Raper, T.B.,** R.H. Blair, F. Allen, M. Ross, R.C. Dunagan, D. McCurley, J.R. Buntin, P.W. Shelby, and J. Mallard. 2016. 2015 Cotton Variety Trial Results. PB1742.

**Raper, T.B.,** R.H. Blair, F. Allen, M. Ross, R.C. Dunagan, D. McCurley, J.R. Buntin, P.W. Shelby, and J. Mallard. 2015. 2016 Cotton Variety Guide. W285.

**Raper, T.B.** 2016. 2016 Tennessee Wheat Quick Facts. W321.

**Raper, T.B.** 2016. 2016 Tennessee Cotton Quick Facts. W319.

Allen. F.L., V.R. Sykes, A.J. Ashworth, V. Benelli, R. Blair, and **T.B. Raper.** 2015 Wheat Variety Performance Tests in TN. Special Report.

**Raper, T.B.** 2015. 2015 Tennessee Cotton Quick Facts. University of Tennessee Extension. W319.

**Raper, T.B.** 2015. 2015 Tennessee Wheat Quick Facts. University of Tennessee Extension. W321.

Dodds, D.M., D.B. Reynolds, L.T. Barber, **T.B. Raper.** 2015. 2015 Mid-South Cotton Defoliation Guide. Mississippi State Extension Service. pp. 1-10.

**Raper, T.B.,** M.S. Wiggins, F. Allen, J.R. Buntin, P.W. Shelby, R.H. Blair, M.B. Ross, and R.C. Dunagan. 2014. 2015 Cotton Variety Guide. W285.

**Raper, T.B.** 2014. 2014 Tennessee Cotton Quick Facts. University of Tennessee Extension. W319.

**Raper, T.B.** 2014. 2014 Tennessee Wheat Quick Facts. University of Tennessee Extension. W321.

Steckel, L.E., G.N. Rhodes, B.D. Sims, R.M. Hayes, M.A. McClure, T.C. Mueller, B.A. Brown, **T.B. Raper**, S.A. Senseman, and E. Walker. 2014. 2015 Weed Control Manual for Tennessee. University of Tennessee Extension. PB1580.

Dodds, D.M., D.B. Reynolds, L.T. Barber, **T.B. Raper.** 2014 Mid-South Cotton Defoliation Guide. Mississippi State Extension Service. pp. 1-10.

# Selected Non-refereed Publications

**Raper, T.B.** 2017. Cotton and potassium: Background and the potential of placement to increase efficiency. Crops and Soils (in press)

Coomer, T., D.M. Oosterhuis, L. Espinoza, & **T.B. Raper.** 2015. Use of remote sensing in cotton to determine potassium status and yield. University of Arkansas Agricultural Experiment Station Research Series 635: 64-67.

Oosterhuis, D.M., D.A. Loka, & **T.B. Raper**. 2014. Potassium and stress alleviation: Physiological functions and management in cotton. International Fertilizer Correspondent: 38: 19-27.

**Raper, T.B.**, D.M. Oosterhuis, L. Espinoza, & T. Coomer.2014. A look at potassium deficiency in cotton: Canopy reflective indices used to examine plant available K. The Fluid Journal: 22: 4-6.

**Raper, T.B.**, C.G. Henry, L. Espinoza, M. Ismanov, and D.M. Oosterhuis. 2014. Sensitivity of two inexpensive, commercially produced soil moisture sensors to changes in water content and soil texture. University of Arkansas Agricultural Experiment Station Research Series 618: 54-59.

**Raper, T.B.**, D.M. Oosterhuis, E.M. Barnes, P.J. Bauer, J.L. Snider, D.M. Dodds, G.C. Collins, J. Whitaker, C.D. Monks, and M.A. Jones. 2014. Development and testing of an available soil moisture index to characterize drought stress. University of Arkansas Agricultural Experiment Station Research Series 618: 47-53.

**Raper, T.B.**, D.M. Oosterhuis, C. Pilon, J.M. Burke, and T. Coomer. 2014. Evaluation of 1-methylcyclopropene to reduce ethylene driven yield reductions in field-grown cotton. University of Arkansas Agricultural Experiment Station Research Series 618:91-95.

Burke, J.M., D.M. Oosterhuis, **T.B. Raper**. 2014. Assessment of the slow-release Nitrogen foliar-fertilizer Nitamin® in comparison to foliar urea and soil-applied Nitrogen to the yield of field-grown cotton (*Gossypium hirsutum,* L.). University of Arkansas Agricultural Experiment Station Research Series 618: 20-22.

Coomer, T.D., D.M. Oosterhuis, **T.B. Raper**, L. Espinoza, C. Pilon, and J.M. Burke. 2014. Analysis of sensitivity of two canopy Nitrogen stress indices to available Potassium and variety. University of Arkansas Agricultural Experiment Station Research Series 618: 27-31.

**Raper, T.B.,** D.M. Oosterhuis, R.L. Raper, and D.H. Pote. 2013. Varietal and Short-term Drought Impacts on Soil Compaction in a Memphis Silt Loam. *In:* D. M. Oosterhuis (ed.) Summaries of Arkansas Cotton Research 2012. University of Arkansas Agricultural Experiment Station Research Series 610: 26-30. Fayetteville, AR.

**Raper, T.B.,** D.M. Oosterhuis, C. Pilon, and J.M Burke. 2013. Evaluation of a Calcium-containing, Soil Applied Nitrogen Source to Increase Cotton Yields. *In:* D. M. Oosterhuis (ed.) Summaries of Arkansas Cotton Research 2012. University of Arkansas Agricultural Experiment Station Research Series 610: 66-70. Fayetteville, AR.

# Selected UTCrops.com Contributions

**Raper, T.B.** Removing juvenile growth AFTER the first harvest aid application. 12 Oct 2017.

**Raper, T.B.** Defoliation window closing? 5 Oct 2017.

Rowsey, G. Cotton defoliation: Is a 2nd application needed? 28 Sept 2017.

Rowsey, G. Cotton defoliation with cool temperatures. 27 Sept 2017.

**Raper, T.B.** Defoliation as temperatures begin to drop. 26 Sept 2017.

**Raper, T.B.** Fayette County Cotton CST Walk, TOMORROW Sept 22nd at 8AM. 20 Sept 2017.

Rowsey, G. Cotton defoliation: Using bolls to determine timing. 17 Sept 2017.

Rowsey, G. Cotton defoliation: Consider regrowth. 15 Sept 2017.

Raper. T.B. Defoliation strip trials placed, comments on harvest aids for Sept 14th. 14 Sept 2017.

**Raper, T.B.** 2017 MidSouth Cotton Defoliation Guide. 9 Sept 2017.

**Raper, T.B.** 2017 University of Tennessee Cotton Tour. 4 Sept. 2017.

**Raper, T.B.** Heat unit accumulation during 2017. 22 Aug 2017.

**Raper, T.B.** Managing cotton plant growth during 2017. 28 Jun 2017.

**Raper, T.B.** Cotton nitrogen management, 2017 comments. 20 June 2017.

**Raper, T.B.** Cotton planting forecast, 5/8-5/12. 8 May 2017.

**Raper, T.B.** 2017 Cotton planting forecast, 5/1-5/5. 1 May 2017.

**Raper, T.B.** Wheat freeze damage update, management and haylage. 28 Mar 2017.

**Raper, T.B.** Freeze damage to jointing wheat. 12 Mar 2017.

**Raper, T.B.** Picking Capacities in the MidSouth. 9 Mar 2017

**Raper, T.B.** Verticillium Wilt in Tennessee Valley Cotton. 3 Mar 2017.

**Raper, T.B.** Southern Cotton Ginners' Association and Foundation Annual Meetings, Farm and Gin Show 2017. 1 Mar 2017.

**Raper, T.B.** 2017 TN Cotton Focus, Feb 9th. 2 Feb 2017.

**Raper, T.B.** UT Meeting Schedule, February 2017. 31 Jan 2017.

**Raper, T.B.** UT Meeting Schedule, January 2017. 9 Jan 2017.

**Raper, T.B.** 2016 Cotton Variety Trial Results. news.utcrops.com. 19 Dec 2016.

**Raper, T.B.** 2017 TN Cotton Variety Guide. news.utcrops.com. 14 Dec 2016.

**Raper, T.B.** Preliminary UT Cotton Variety Strip Trial Data Now Available. 23 Nov 2016.

**Raper, T.B.** 2016 Tennessee Wheat Quick Facts now available. news.utcrops.com. 14 Oct 2016.

**Raper, T.B.** Wrapping up harvest aid applications in 2016. news.utcrops.com. 5 Oct 2016.

**Raper, T.B.** Defoliation and boll opening under cooler conditions. 25 Sept. 2016.

**Raper, T.B.** 2016 Cotton Defoliation Strip Trial in Lincoln County, TN. news.utcrops.com 16 Sept 2016.

**Raper, T.B.** 2016 Mid-South Cotton Defoliation Guide. news.utcrops.com. 7 Sept 2016.

Kelly, H. and **T.B. Raper**. Target spot and boll drop- the knowns and unknowns. news.utcrops.com. 3 Sept 2016.

**Raper, T.B.** Cotton turning. . . too soon? news.utcrops.com. 31 Aug 2016.

**Raper, T.B.** 2016 University of Tennessee Cotton Tour. news.utcrops.com. 22 Aug 2016.

**Raper, T.B.** 2016. Red leaves in cotton causes and implications. 30 July 2016.

**Raper, T.B.** Managing cotton fertility; new Plant Management Network Presentation now available. news.utcrops.com. 13 Jul 2016.

**Raper, T.B.** Updated sulfur recommendations for cotton. news.utcrops.com. 6 Jul 2016.

**Raper, T.B.** Managing cotton plant growth in 2016. news.utcrops.com. 4 Jul 2016.

**Raper, T.B.** Making the decision to replant in 2016. news.utcrops.com. 23 May 2016.

**Raper, T.B.** Cotton planting forecast, May 6th. news.utcrops.com. 6 May 2016.

**Raper, T.B.** Cotton planting forecast. news.utcrops.com. 24 Apr 2016.

**Raper, T.B.** Increasing water use efficiency, drought tolerance and yields with cover crops. news.utcrops.com. 22 Mar 2016.

**Raper, T.B.** A few thoughts on incorporating/managing cover crops. news.utcrops.com. 18 Mar 2016.

**Raper, T.B.** Cotton variety characteristics/management descriptions. news.utcrops.com. 3 Mar 2016.

**Raper, T.B.** 2016 Mid-South Farm and Gin Show, Mid-South Ag Forum and SCGA Annual Meeting. news.utcrops.com. 18 Feb 2016.

**Raper, T.B.** 2016 Cotton Focus Agenda. news.utcrops.com. 21 Jan 2016.

**Raper, T.B.** 2015 TN Cotton Variety Trial Results. news.utcrops.com. 10 Jan 2016.

# Selected Popular Press Contributions/Articles

11/1/2017 Cotton Farming **Raper, T.B.** Specialists Speaking November 2017

10/16/2017 Growing Tennessee **Raper, T.B.** Removing juvenile growth after the first harvest aid application

10/13/2017 MidAmerica Farmer Grower **Raper, T.B.** Defoliation Window Closing?

10/12/2017 AgFax Tennessee Cotton: Removing juvenile growth after the 1st harvest aid application

10/12/2017 Ag Professional Removing juvenile cotton leaf growth after first harvest aid application

10/9/2017 Growing Tennessee **Raper, T.B.** Defoliation window closing?

10/6/2017 MidAmerica Farmer Grower **Raper, T.B.** Defoliation as temperatures begin to drop.

10/6/2017 Ag Watch Network Simmons, T. Tennessee: Defoliation window closing?

10/5/2017 AgFax Tennessee Cotton: Is our defoliation window closing?

10/3/2017 Growing Tennessee Rowsey, G. Cotton Defoliation: Is a 2nd application needed?

10/2/2017 Growing Tennessee **Raper, T.B.** Cotton defoliation with cool temperatures

10/1/2017 Cotton Farming **Raper, T.B.** Specialists Speaking October 2017

9/29/2017 Farms.com Cotton defoliation with cool temperatures

9/29/2017 Farms.com Cotton defoliation

9/28/2017 AgFax Tennessee: Cotton defoliation- is a 2nd application needed? - video

9/27/2017 Growing Tennessee **Raper, T.B.** Defoliation as temperatures begin to drop

9/27/2017 AgFax Tennessee Cotton: Defoliation with cool temperatures- video

9/27/2017 AgFax Tennessee Cotton: Defoliation as temperatures begin to drop

9/22/2017 MidAmerica Farmer Grower **Raper, T.B.** 2017 MidSouth Cotton Defoliation Guide

9/20/2017 Growing Tennessee Rowsey, G. Cotton defoliation: Using bolls to determine timing

9/20/2017 Farms.com Using bolls to determine defoliation timing

9/18/2017 Growing Tennessee Rowsey, G. Cotton defoliation: Consider regrowth

9/18/2017 AgFax Tennessee: Cotton defoliation- using bolls to determine timing- video

9/15/2017 Delta Farm Press Dow AgroSciences field day showcases technologies and a farmer's success

9/15/2017 AgFax Tennessee: Cotton defoliation- consider regrowth- video

9/14/2017 AgFax Tennessee Cotton: Recommendations for harvest aids- products and timing

9/12/2017 Growing Tennessee **Raper, T.B.** 2017 MidSouth Cotton Defoliation Guide

9/11/2017 Cotton Grower Steadman, J. Updated MidSouth Defoliation Guide Now Online.

9/11/2017 AgFax Tennessee: 2017 MidSouth Cotton Defoliation Guide Available

9/11/2017 Farms.com Cotton Target

9/5/2017 Growing Tennessee **Raper, T.B.** 2017 University of Tennessee Cotton Tour

9/1/2017 MidAmerica Farmer Grower Cotton Field Day Set

9/1/2017 Cotton Farming **Raper, T.B.** Specialists Speaking September 2017

8/24/2017 Growing Tennessee **Raper, T.B.** Heat unit accumulation during 2017

8/22/2017 AgFax Tennessee Cotton: Heat unit accumulation during 2017

8/9/2017 Ag Watch Network Simmons, T. Cotton Tour Field Day set for September 6

8/3/2017 Cotton Farming **Raper, T.B.** Specialists Speaking August 2017

7/1/2017 The Seam Bloom period considerations

7/1/2017 Cotton Farming **Raper, T.B.** Specialists Speaking July 2017

6/30/2017 Tennessee Farmer's Cooperative Magazine Geyer, S. Cotton makes a comeback

6/30/2017 Growing Tennessee **Raper, T.B.** Managing cotton plant growth during 2017

6/30/2017 MidAmerica Farmer Grower **Raper, T.B.** Cotton nitrogen management, 2017 comments

6/30/2017 Farms.com Managing cotton plant growth during 2017

6/29/2017 The Seam Measuring variety responsiveness to PGRs

6/29/2017 Cotton Grower Steadman, J. Measuring variety responsiveness to PGRs

6/28/2017 AgFax Tennessee Cotton: Managing plant growth during 2017

6/23/2017 Cotton Grower Steadman, J. Thoughts on cotton nitrogen management

6/23/2017 The Seam Thoughts on cotton nitrogen management

6/22/2017 Growing Tennessee **Raper, T.B.** Cotton nitrogen management, 2017 comments

6/20/2017 AgFax Tennessee Cotton: 3 considerations for nitrogen management

6/1/2017 AgFax Ferguson, D. Cotton- MidSouth- 'Worst Ever' Planting Season? That's what we're hearing

5/25/2017 AgFax Taylor, O. Cotton: An active plant bug year in Midsouth?

5/18/2017 AgFax Ferguson, D. Midsouth cotton, 5/18: Big cotton planting push, finally

5/11/2017 AgFax Taylor, O. Midsouth cotton: Big planting push ahead of next rain

5/10/2017 Growing Tennessee **Raper, T.B.** Cotton planting forecast

5/9/2017 AgFax Tennessee Cotton: Good week for planting but watch weekend rains

5/8/2017 AgFax Tennessee Cotton: Expect a good week for planting

5/3/2017 Growing Tennessee **Raper, T.B.** 2017 Cotton Planting Forecast

5/2/2017 AgFax Tennessee Cotton: Planting forecast very poor, but there's still time

5/1/2017 Cotton Farming **Raper, T.B.** Specialists Speaking May 2017

5/1/2017 Delta Farm Press Bennett, D. How is Mid-South cotton faring after late April rains?

4/21/2017 Delta Farm Press Robb, B. Maintaining cotton's momentum in the Mid-South

**Selected Meeting Abstracts**

**Raper, T.B.**, D.M. Dodds, A. Jones, B. Robertson, D.D. Fromme, T. Sandlin, T. Cutts, and R. Blair. 2017. Genetic and environmental contributions to cotton yield and fiber quality in the Midsouth. Proc. ASA/CSSA/SSSA Annual Meetings, Madison, WI.

A. Shekoofa, **T.B. Raper**, and D. Verbree. 2017. The impact of irrigation and nitrogen rate on yield and fiber quality of determinate and indeterminate cotton cultivars. Proc. ASA/CSSA/SSSA Annual Meetings, Madison, WI.

X. Yin, **T.B. Raper**, and H.J. Savoy. 2017. Sulfur applications on no-till cotton and soil sulfur testing method comparison. Proc. ASA/CSSA/SSSA Annual Meetings, Madison, WI.

S. Butler, **T.B. Raper**, and M. Buschermohle. 2017. Utilizing an aerial platform to assess cotton plant population. Proc. ASA/CSSA/SSSA Annual Meetings, Madison, WI.

**Raper, T.B.**, L. Duncan and S. Butler. 2017. Utilization of an inexpensive digital camera to assess cotton N status. Nitrogen Use Efficiency Conference, Baton Rouge, LA.

Byrd, S.A., **T.B. Raper**, D.M. Dodds, A.S. Jones, G.D. Morgan, and R. Norton. 2017. Nozzle type and carrier volume influence on defoliation. Proc. Beltwide Cotton Conf., National Cotton Council of America, Memphis, TN.

Fromme, D.D., K. Shannon, G.D. Morgan, D. Mott, H. Frame, D.M. Dodds, **T.B. Raper**. 2017. Evaluation of early season foliar fungicide applications for improved plant health. Proc. Beltwide Cotton Conf., National Cotton Council of America, Memphis, TN.

Plumblee, M.T., D.M. Dodds, **T.B. Raper**, A.S. Jones, D.D. Fromme. 2017. Damage simulation in early- and late-maturing cotton varieties in the Mid-south. Proc. Beltwide Cotton Conf., National Cotton Council of America, Memphis, TN.

Morgan, G., H. Frame, D. Dodds, A. Jones, M. Jones, K. Lewis, R. Norton, B. Robertson, T. Raper, B. Nichols. 2017. Multi-year cotton yield, quality, and plant growth response to soil-applied potassium. Proc. Beltwide Cotton Conf., National Cotton Council of America, Memphis, TN.

Butler, S., **T.B. Raper**, M. Buschermohle, and R. Freeland. 2016. Utilization of an aerial platform to guide replant decisions. Proc. ASA/CSSA/SSSA Annual Meetings, Madison, WI.

Raper. T.B., E.M. Barnes, M. Buschermohle, A.R. Asebedo, L. Duncan, S. Butler, and R. Freeland. 2016. In-season assessment of cotton N status from an inexpensive digital camera. Proc. ASA/CSSA/SSSA Annual Meetings, Madison, WI.

Collins, G.D., R. Blair, R. Boman, S. Byrd, D. Delaney, D. Dodds, S. Duncan, K. Edmisten, H. Frame, D. Fromme, A. Jones, M. Jones, M. Kelley, K. Keys, J. McGinty, G. Morgan, R. Norton, **T.B. Raper**, B. Robertson, J. Whitaker, D. Wright, R. Nichols. 2016. 2015 Beltwide On-farm cotton variety performance. Proc. Beltwide Cotton Conf., National Cotton Council of America, Memphis, TN.

Plumblee, M.T., D.M. Dodds, **T.B. Raper**, A.S. Jones, D.D. Fromme. 2016. Damage simulation in early- and late-maturing cotton varieties in the MidSouth. Proc. Beltwide Cotton Conf., National Cotton Council of America, Memphis, TN.

Morgan, G., H. Frame, D. Fromme, D. Dodds, K. Edmisten, M. Jones, R. Norton, A. Jones, B. Robertson, R. Boman, **T.B. Raper**, K. Lewis, D. Delaney, A. Hagan, B. Nichols. 2016. Impact of soil applied potassium on cotton yield across the cottonbelt. Proc. Beltwide Cotton Conf., National Cotton Council of America, Memphis, TN.

**Raper, T.B.**, D.M. Oosterhuis, E.M. Barnes, D. Dodds, G.D. Collins, J. Whitaker, M.A. Jones, and D. Monks. 2015. Processing high-frequency soil moisture sensor data to characterize drought stress experienced in large cotton variety trials. Proc. ASA/CSSA/SSSA Annual Meetings, Madison, WI.

**Service**

**Panel Member,** National Institute of Food and Agriculture Critical Agricultural Research and Extension Grant Panel. October 2016

**Chair**, Sensor-based water management community, Climatology and Modeling Section, American Society of Agronomy. 2015-2016

**Chair,** Agronomy Physiology, and Soils Conference, Beltwide Cotton Conferences. 2016-2017.

**Panel Member,** National Institute of Food and Agriculture Critical Agricultural Research and Extension Grant Panel. October 2015

**Co-chair,** Agronomy and Physiology Conference, Beltwide Cotton Conferences. 2015-2016.

**Vice-chair**, Sensor-based water management community, Climatology and Modeling Section, American Society of Agronomy. 2014-2015

**President**, Crop, Soil and Environmental Sciences Graduate Student Club. University of Arkansas, Fayetteville, AR. 2013-2014.

**Judge,** Northwest Arkansas Regional Science and Engineering Fair. Office of the Graduate School, University of Arkansas, Fayetteville, AR. Spring 2013

**Crops Representative,** Crop, Soil and Environmental Sciences Graduate Student Club. University of Arkansas, Fayetteville, AR. 2012-2013.

**Speaker**, 2010 Natural Resources Teacher Workshop. Natural Resources Conservation Service. Primer on Basic Soils. Rolling Fork, MS.

**Professional Association Membership**

American Society of Agronomy

Crop Science Society of America

Soil Science Society of America

Tennessee Association of Agricultural Agents and Specialists

Sigma Xi, University of Arkansas and University of Tennessee (inducted 2016)

Gamma Sigma Delta (University of Arkansas)

Tennessee Agricultural Production Association Member

**Selected Awards**

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| **Cotton Specialist of the Year**, U.S. Cotton Specialists’ Working Group**Pettigrew Endowment,** UT Institute of Agriculture; Knoxville, TN**Tom Cothren Outstanding Young Cotton Physiologist of the Year**, Cotton Beltwide Conference, Dallas, TX**Bill and Ann Hicks Outstanding New Extension Worker Award**, UT Institute of Agriculture; Knoxville, TN | 2019201820182017 |
| **Early Career Award**, TAAA&S; Knoxville, TN | 2017 |
| **Ag Innovation Achievement Award,** Southern Cotton Ginners Association; Mid-South Farm and Gin Show. Memphis, TN | 2017 |
| Second Place Publication, State TAAA&S Communications Award; Knoxville, TN | 2017 |
| **Walton Distinguished Doctoral Fellowship**. University of Arkansas, Fayetteville, AR | 2011-14 |
| **Aubrey E. Harvey Outstanding Graduate Research Award**. Sigma Xi. University of Arkansas. Fayetteville, AR | 2014 |
| **Gerald O. Mott Award.** University of Arkansas, Crop Science Society of America, Madison, WI | 2014 |
| **Spooner mini-sabbatical Scholarship**. Department of Crop, Soil and Environmental Sciences. University of Arkansas, Fayetteville, AR | 2013 |
| **First Place PhD Poster Presentation**, Gamma Sigma Delta Student Competition. University of Arkansas, Fayetteville, AR Title: Response of Canopy Nitrogen Stress Indices to Variety and Available Potassium | 2013 |
| **First Place Poster**, Crops Section. 2013 Graduate School Poster Competition, University of Arkansas, Fayetteville, AR Title: Response of Canopy Nitrogen Stress Indices to Variety and Available Potassium | 2013 |
| **First Place Poster**, Agriculture 2 Section, Graduate School Poster Competition, University of Arkansas, Fayetteville, AR Title: Assessment of Cotton N Status by a Digital Camera | 2012 |
| **First Place Oral Presentation**, Soils Section, Southern Agronomy Society of America Meeting, Corpus Christi, TX, Title: Utilization of Crop Sensors to Detect Cotton Growth and N Stress. | 2011 |
| **First Place Poster**, Soil Management and Plant Nutrition Section, Beltwide Cotton Conferences. Title: Sensor Based Prediction of Cotton Growth, Leaf Nitrogen, and Biomass Nitrogen. | 2010 |