

# Crop Production Systems Research Unit USDA-ARS, Stoneville, Mississippi, USA

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## 2017 Publications

1. Wagle, P., P.H. Gowda, S.S. Anapalli, K.N. Reddy and B.K. Northup. 2017. Growing season variability in carbon dioxide exchange of irrigated and rainfed soybean in the southern United States. *Science of the Total Environment*. 593-594:263-273. PDF
2. Runkle, B.R., J.R. Rigby, M.L. Reba, S.S. Anapalli, J. Bhattacharjee, K.W. Krauss, L. Liang, M.A. Locke, K.A. Novick, R. Sui, K. Suvocarev and P.M. White, Jr. 2017. Delta -Flux: An eddy covariance network for a climate-smart lower Mississippi basin. *Agricultural & Environmental Letters*. doi:10.2134/ael2017.01.0003. PDF
3. Ma, L., L.R. Ahuja, A. Islam, T.J. Trout, S.S. Anapalli and R.W. Malone. 2017. Modeling yield and biomass responses of maize cultivars to climate change under full and deficit irrigation. *Agricultural Water Management*. 180:88-98. PDF
4. Bruns, H.A. 2017. Soybean micronutrient content in irrigated plants grown in the Midsouth. *Communications in Soil Science and Plant Analysis*. 48(7): 808-817. PDF
5. Bruns, H.A. 2017. Effects of boron foliar fertilization on irrigated soybean (*Glycine max* L. Merr.) in the Mississippi River Valley Delta of the midsouth, USA. *Archives of Agriculture and Environmental Science*. 2(3): 167-169. PDF
6. Bruns, H.A. 2017. Southern corn leaf blight: A story worth retelling. *Agronomy Journal*. 109(4):1-7. PDF
7. Fisher, D.K. and Y. Huang. 2017. Mobile open-source plant-canopy monitoring system. *Modern Instrumentation*. 6:1-13. PDF
8. Pringle, H.C., L. Falconer, D.K. Fisher and L.J. Krutz. 2017. Initiation of furrow irrigation in corn on a Dundee/Forestdale silty clay loam soil with and without deep tillage. *Applied Engineering in Agriculture*. 33(2):205-216. PDF
9. Gao, F., G. Feng, Y. Ouyang, H. Wang, D. Fisher, A. Adeli and J. Jenkins. 2017. Evaluation of reference evapotranspiration methods in arid, semiarid, and humid regions. *Journal of the American Water Resources Association*. 53(4):791-808. PDF
10. Fletcher, R.S. and R.B. Turley. 2017. Employing canopy hyperspectral narrowband data and random forest algorithm to differentiate palmer amaranth from colored cotton. *American Journal of Plant Sciences*. 8: 3258-3271. PDF
11. Hoagland, R.E., C.D. Boyette, and K.C. Stetina. 2017. Extending the shelf-life of *Myrothecium verrucaria*, a bioherbicide. *American Journal of Plant Sciences*. 8: 3272-3284. PDF
12. Huang, Y., C.M. Ouellet-Plamondon, S.J. Thomson, and K.N. Reddy. 2017. Characterizing downwind deposition of the off-target drift from aerially applied glyphosate using RbCl as tracer. *International Journal of Agricultural and Biological Engineers*. 10(3):31-36. PDF
13. Liang, X. Li, Y. Huang, Y. Qin, and H. Huang. 2017. Integrating remote sensing, GIS and dynamic models for landscape-level simulation of forest insect disturbance. *Ecological Modelling*. 354: 1-10. PDF

14. Zhang, J., Y. Huang, Z. Li, P. Liu, and L. Yuan. 2017. Noise-resistant spectral features for retrieving foliar chemical parameters. *IEEE Journal of Selected Topics in Applied Earth Observations and Remote Sensing*. 10(12): 5369-5379. [PDF](#)
15. Thomson, S.J., Y. Huang and B.K. Fritz. 2017. Atmospheric stability intervals influencing the potential for off-target movement of spray in aerial application. *International Journal of Agricultural Science and Technology*. 5(1):17pgs. PDF
16. Lin, F., Z. Dongyan, Y. Huang, X. Wang, and X. Chen. 2017. Detection of corn and weed species by the combination of spectral, shape and textural features. *Sustainability*. 9:1335-1348; doi10.3390/su9081335. PDF
17. Molin, W.T. and V.K. Nandula. 2017. Morphological characterization of *Amaranthus palmeri* x *A. spinosus* hybrids. *American Journal of Plant Sciences*. 8: 1499-1510. PDF
18. Molin, W.T., A.A. Wright, A. Lawton-Rauh and C.A. Saski. 2017. The unique genomic landscape surrounding the *EPSPS* gene in glyphosate resistant *Amaranthus palmeri*: a repetitive path to resistance. *BioMed Central Genomics*. 18: 91-107. PDF
19. Nandula, V.K. 2017. Recent advances in deciphering metabolic herbicide resistance mechanisms. In: Jugulam, Mithila, editor. *Biology, Physiology and Molecular Biology of Weeds*. CRC Press, Taylor and Francis Group. Chapter 8, pgs. 144-155. [PDF](#)
20. Nandula, V.K., P. Tehranchian, J.A. Bond, J.K. Norsworthy and T.W. Eubank. 2017. Glyphosate resistance in common ragweed (*Ambrosia artemisiifolia* L.). *Weed Biology and Management*. 17:45-53. PDF
21. Jenkins, M.B., M.A. Locke, K.N. Reddy, D.S. McChesney, and R.W. Steinriede. 2017. Impact of glyphosate-resistant corn, glyphosate applications and tillage on soil nutrient ratios, exoenzyme activities and nutrient acquisition ratios. *Pest Management Science*. 73: 78-86. PDF
22. Jenkins, M., M. Locke, K.N. Reddy, D.S. McChesney and R.W. Steinriede. 2017. Glyphosate applications, glyphosate resistant corn, and tillage on nitrification rates and distribution of nitrifying microbial communities. *Soil Science Society of America Journal*. 81:1371-1380. PDF
23. Sui, R. and H. Yan. 2017. Field study of variable rate irrigation management in humid climates. *Irrigation and Drainage*. DOI: 10.1002/ird.2111. PDF
24. Sui, R., R.K. Byler, and C.D. Delhom. 2017. Effect of nitrogen application rate on yield and quality in irrigated and rainfed cotton. *Journal of Cotton Science*. 21:113-121. PDF
25. Li, M., Y. Liu and R. Sui. 2017. Effects of irrigation amount on alfalfa yield and quality with a center-pivot system. *Transactions of the American Society of Agricultural and Biological Engineers*. 60(5):1633-1644. PDF
26. Wang, R., J.A. Thomasson, M.S. Cox, R. Sui and E.G. Marley Hollingsworth. 2017. Cotton fiber-quality prediction based on spatial variability in soils. *Journal of Cotton Science*. 21:220-228. PDF
27. Little, N.S., R.M. Mullen, K.C. Allen and H.L. Tyler. 2017. Leaf tissue assay for lepidopteran pests of Bt cotton. *Southwestern Entomologist*. 42(4):953-958. PDF