

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

Dr. Krishna N. Reddy, Research Leader
Krishna.Reddy@usda.gov

2019 Publications

1. Anapalli, S.S., D.K. Fisher, K.N. Reddy, J.L. Krutz, S.R. Pinnamaneni, and R. Sui. 2019. Quantifying water and CO₂ fluxes and water use efficiencies across irrigated C3 and C4 crops in a humid climate. *Science of the Total Environment*. 663:338-350. [PDF](#)
2. Anapalli, S.S., D.K. Fisher, K.N. Reddy, N. Rajan, S.R. Pinnamaneni. 2019. Modeling evapotranspiration for irrigation water management in a humid climate. *Agricultural Water Management*. 225:105731, 11pgs. [PDF](#)
3. Bruns, H.A. 2019. Comparison of yield components and physiological parameters of drought tolerant and conventional corn hybrids. *Agronomy Journal*. 111(2):1-7. [PDF](#)
4. Bruns, H.A. 2019. Grain sorghum yield components as influenced by hybrid, seeding date, and irrigation. *Agrosystems, Geosciences and Environment*. 2:180030, 4 pgs. [PDF](#)
5. Pringle, H.C., L.L. Falconer, D.K. Fisher, and L.J. Krutz. 2019. Soybean irrigation initiation in Mississippi: Yield, soil moisture, and economic response. *Applied Engineering in Agriculture*. 35(1):39-50. [PDF](#)
6. Fletcher, R.S. 2019. Canopy hyperspectral reflectance of redroot pigweed versus okra and super okra leaf cotton. *Agricultural Sciences*. 10: 1465-1476. [PDF](#)
7. Fletcher, R.S. and D.K. Fisher. 2019. Spatial analysis of soybean plant height and plant canopy temperature measured with on-the-go tractor mounted sensors. *Agricultural Sciences*. 10: 1486-1496. [PDF](#)
8. Boyette, C.D., R.E. Hoagland, and K.C. Stetina. 2019. Extending the host range of the bioherbicide fungus *Colletotrichum gloeosporioides* f.sp. *aeschynomene*. *Biocontrol Science and Technology*. 29(7):720-726. [PDF](#)
9. Huang, Y. 2019. Perspectives and experiences on the development and innovation of agricultural aviation and precision agriculture from the Mississippi Delta and recommendations for China. *Smart Agriculture*. 1(4): 12-30. [PDF](#)
10. Huang, Y., D.K. Fisher, M. Silva, and S.J. Thomson. 2019. A real-time web tool for safe aerial application to avoid off-target movement of spray induced by stable atmospheric conditions in the Mississippi Delta. *Applied Engineering in Agriculture*. 35(1):31-38. [PDF](#)
11. Zhang, J., Y. Huang, K.N. Reddy, and B. Wang. 2019. Assessing crop damage from dicamba on non-dicamba-tolerant soybean by hyperspectral imaging through machine learning. *Pest Management Science*. 75:3260-3272. [PDF](#)
12. Xia, L., R. Zhang, L. Chen, Y. Huang, G. Xu, Y. Wen, and T. Yi. 2019. Monitor Cotton Budding Using SVM and UAV Images. *Applied Sciences*. 9: (4312) 13pgs. [PDF](#)
13. Belabid, N., F. Zhao, L. Brocca, Y. Huang, and Y. Tan. 2019. Near-real-time flood forecasting based on satellite precipitation products. *Remote Sensing*. 11(3) 252: 1-18. [PDF](#)

14. Wen, Y. R. Zhang, L. Chen, Y. Huang, T. Yi, G. Xu, L. Li, A.J. Hewitt. 2019. A new spray deposition pattern measurement system based on spectral analysis of a fluorescent tracer. *Computers and Electronics in Agriculture*. 160:14-22. [PDF](#)
15. Molin, W.T. 2019. How *Amaranthus palmeri* evolved from an obscure plant of North America to become the biggest weed problem in the US corn and soybean belt. *Outlooks on Pest Management*. 30(4):176-170. [PDF](#)
16. Molin, W.T. and C.T. Bryson. 2019. Variation in 5-Enolpyruvylshikimate-3-Phosphate Synthase (EPSPS) coding sequences and glyphosate response among *Cyperus rotundus* L. populations. *American Journal of Plant Sciences* . 10(12):2366-2381. [PDF](#)
17. Molin, W.T., R.R. Kronfol, J.D. Ray, B.E. Scheffler, and C.T. Bryson. 2019. Genetic diversity among geographically separated *Cyperus rotundus* accessions based on RAPD markers and morphological characteristics. *American Journal of Plant Sciences*. 10(11):2034-2046. [PDF](#)
18. Bellaloui, N., R.B. Turley, S.R. Stetina, and W.T. Molin. 2019. Cottonseed protein, oil and mineral nutrition in near-isogenic *Gossypium hirsutum* cotton lines expressing leaf color phenotypes under field conditions. *Food and Nutrition Sciences*. 10:834-859. [PDF](#)
19. Turley, R.B., S.R. Stetina, N. Bellaloui, and W.T. Molin. 2019. Comparison of growth, yield, and fiber quality of the obsolete SA30 yellow leaf with four sets of modern yellow and green leaf near isogenic cotton (*Gossypium hirsutum* L.) lines. *Journal of Cotton Science*. 23:253-261. [PDF](#)
20. Nandula, V.K. 2019. Herbicide resistance traits in maize and soybean: Current status and future outlook. *Plants*. 8:337-345. [PDF](#)
21. Nandula, V.K., D.E. Riechers, Y. Ferhatoglu, M. Barrett, S.O. Duke, F.E. Dayan, A. Goldberg-Cavalleri, C.Tetard-Jones, D.J. Wortley, N. Onkokesung, M. Brazier-Hicks, R. Edwards, T. Gaines, S. Iwakami, M. Jugulam and R. Ma. 2019. Herbicide metabolism: Crop selectivity, bioactivation, weed resistance, and regulation. *Weed Science*. 67:149-175. [PDF](#)
22. Tehranchian, P., V.K. Nandula, M. Matzrafi, and M. Jasieniuk. 2019. Multiple herbicide resistance in California Italian Ryegrass (*Lolium perenne* ssp. multiflorum): Characterization of ALS-Inhibiting herbicide resistance. *Weed Science*. 67(3):273-280. [PDF](#)
23. Reddy, K.N. and W.T. Molin. 2019. Sustainable weed control in cotton. In: Korres, N. E., N.R. Burgos, and S.O. Duke, (eds.), *Weed Control Sustainability, Hazards and Risks in Cropping Systems Worldwide*. CRC Press, Taylor and Francis Group, Boca Raton, FL.. pp. 306-324.
24. Korres, N.E., K.N. Reddy, C. Rouse, and A.C. King. 2019. Sustainable weed control in soybean. In: Korres, N. E., N.R. Burgos, and S.O. Duke, (eds.), *Weed Control Sustainability, Hazards and Risks in Cropping Systems Worldwide*. CRC Press, Taylor and Francis Group, Boca Raton, FL. pp. 288-305.
25. Sui, R. 2019. Performance assessment of a variable-rate fertilizer applicator. *Journal of Agricultural Science*. 11(2):25-30. [PDF](#)
26. Sui, R., H.C. Pringle, and E.M. Barnes. 2019. Soil moisture sensor test with Mississippi Delta soils. *Transactions of the American Society of Agricultural and Biological Engineers*. 62(2):363-370. [PDF](#)
27. Li, Maona, R. Sui, Y. Meng, and H. Yan. 2019. A real-time fuzzy decision support system for alfalfa irrigation. *Computers and Electronics in Agriculture*. 163 (2019):104870. [PDF](#)

28. Olanrewaju, S., N. Rajan, A.M. Ibrahim, J.C. Rudd, S. Liu, R. Sui, K.E. Jessup, and Q. Xue. 2019. Using aerial and digital photography and aerial imagery to monitor growth and yield in winter wheat. *International Journal of Remote Sensing*. 40(18):6905-6929. [PDF](#)
29. Tyler, H.L. 2019. Bacterial community composition under long-term reduced tillage and no till management. *Journal of Applied Microbiology*. 126:1797-1807. [PDF](#)
30. Tyler, H.L., and Locke, M.A. 2019. Effects of weed management on soil ecosystems. In: *Weed Control: Sustainability Hazards, and Risks in Cropping Systems Worldwide*. Eds. Korres N.E., Burgos N.R., and Duke, S.O. Boca Raton, USA, Taylor & Francis Group, Chapter 3, pp. 32-61.
31. Haron, M.H., H.L. Tyler, S. Chandra, R.M. Moraes, C.R. Jackson, N.D. Pugh, and D.S. Pasco. 2019. Plant microbiome-dependent immune enhancing action of *Echinacea purpurea* is enhanced by soil organic matter content. *Scientific Reports*. 9:136-147. [PDF](#)
32. Zhang, J., H.L. Tyler, M.H. Haron, C.R. Jackson, D.S. Pasco, and N.D. Pugh. 2019. Macrophage activation by edible mushrooms is due to the collaborative interaction of toll-like receptor agonists and dectin-1b activating beta glucans derived from colonizing microorganisms. *Food and Function*. 10:8208-0217. [PDF](#)