

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

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

2016 Publications

1. Anapalli, S.S., W.T. Pettigrew, K.N. Reddy, L. Ma, D.K. Fisher and R. Sui. 2016. Climate-optimized planting windows for cotton in the lower Mississippi Delta region. *Agronomy*. 6(4):46 16pgs. [PDF](#)
2. Anapalli, S.S., D.K. Fisher, K.N. Reddy, W.T. Pettigrew, R. Sui and L.R. Ahuja. 2016. Vulnerabilities and adapting irrigated and rainfed cotton to climate change in the lower Mississippi Delta region. *Climate*. 4(55):1-20. [PDF](#)
3. Anapalli, S.S., L.R. Ahuja, P.H. Gowda, L. Ma, G. Marek, S.R. Evett and T.A. Howell. 2016. Simulation of crop evapotranspiration and crop coefficients with data in weighing lysimeters. *Agricultural Water Management*. 177:274-283. [PDF](#)
4. Bruns, H.A. 2016. Flag leaf photosynthesis and stomatal function of grain sorghum as influenced by changing photosynthetic photon flux densities. *International Journal of Agronomy*. Article ID:1363740, 6pgs. [PDF](#)
5. Bruns, H.A. 2016. Macro-nutrient concentration and content of irrigated soybean grown in the early production system of the midsouth. *Communications in Soil Science and Plant Analysis*. 47(17):2008-2016. [PDF](#)
6. Abbas, H.K., N. Bellaloui and H.A. Bruns. 2016. Investigating transgenic corn hybrids as a method for mycotoxin control. *Food and Nutrition Sciences*. 7:44-54. [PDF](#)
7. Fletcher, R.S. 2016. Using vegetation indices as input into random forest for soybean and weed classification. *American Journal of Plant Sciences*. 7:2186-2198. [PDF](#)
8. Fletcher, R.S. and K.N. Reddy. 2016. Random forest and leaf multispectral reflectance data to differentiate three soybean varieties from two pigweeds. *Computers and Electronics in Agriculture*. 128:199-206. [PDF](#)
9. Fletcher, R.S., K.N. Reddy and R.B. Turley. 2016. Spectral discrimination of two pigweeds from cotton with different leaf colors. *American Journal of Plant Sciences*. 7:2138-2150. [PDF](#)
10. Hoagland, R.E., C.D. Boyette, K.C. Stetina and R.H. Jordan. 2016. Bioherbicide efficacy of a *Myrothecium verrucaria*-sector on several plant species. *American Journal of Plant Sciences*. 7(16):2376-2389. [PDF](#)
11. Boyette, C.D., R.E. Hoagland and K.C. Stetina. 2016. Efficacy improvement of a bioherbicide fungus using a formulation-based approach. *American Journal of Plant Sciences*. 7(16):2349-2358. [PDF](#)
12. Weaver, M.A., C. D. Boyette and R.E. Hoagland. 2016. Management of kudzu by the bioherbicide, *Myrothecium verrucaria*, herbicides and integrated control programmes. *Biocontrol Science and Technology*. 26(1):136-140. [PDF](#)
13. Weaver, M.A., C.D. Boyette and R.E. Hoagland. 2016. Rapid kudzu eradication and switchgrass establishment through herbicide, bioherbicide and integrated programmes. *Biocontrol Science and Technology*. 26(5):640-650. [PDF](#)

14. Huang, Y., M.A. Lee, S.J. Thomson and K.N. Reddy. 2016. Ground-based hyperspectral remote sensing for weed management in crop production. *International Journal of Agricultural and Biological Engineers*. 9(2):98-109. [PDF](#)
15. Huang, Y., L. Yuan, K.N. Reddy and J. Zhang. 2016. In-situ plant hyperspectral sensing for early detection of soybean injury from dicamba. *Biosystems Engineering*. 149:51-59. [PDF](#)
16. Huang, Y., S.J. Thomson, H.J. Brand and K.N. Reddy. 2016. Development and evaluation of low-altitude remote sensing systems for crop production management. *International Journal of Agricultural and Biological Engineering*. 9(4):1-11. [PDF](#)
17. Huang, Y., H.J. Brand, R. Sui, S.J. Thomson, T. Furukawa and M.W. Ebelhar. 2016. Cotton yield estimation using very high-resolution digital images acquired with a low-cost small unmanned aerial vehicle. *Transactions of the American Society of Agricultural and Biological Engineers*. 59(6):1563-1574. [PDF](#)
18. Zhang, J., Y. Huang, L. Yuan, G. Yang, L. Chen and C. Zhao. 2016. Using satellite multispectral imagery for damage mapping of armyworm (*Spodoptera frugiperda*) in maize at a regional scale. *Pest Management Science*. 72:335-348. [PDF](#)
19. Huang, J., F. Sedano, Y. Huang, H. Ma, X. Li, S. Liang, L. Tian, X. Zhang, J. Fan and W. Wu. 2016. Assimilating a synthetic Kalman filter leaf area index series into the WOFOST model to improve regional winter wheat yield estimation. *Agricultural and Forest Meteorology*. 216:188-202. [PDF](#)
20. Zhang, D., F. Lin, Y. Huang, X. Wang and L. Zhang. 2016. Detection of wheat powdery mildew by differentiating background factors using hyperspectral imaging. *International Journal of Agriculture and Biology*. 18(4):747-756. [PDF](#)
21. Molin, W.T., V.K. Nandula, A.A. Wright, and J.A. Bond. 2016. Transfer and expression of ALS inhibitor resistance from Palmer Amaranth (*Amaranthus palmeri*) to an *A. spinosus* x *A. palmeri* hybrid. *Weed Science*. 64(2):240-247. [PDF](#)
22. Molin, W.T. and S.R. Stetina. 2016. Weed hosts and relative weed and cover crop susceptibility to *Rotylenchulus reniformis* in the Mississippi Delta. *Nematropica*. 46:121-131. [PDF](#)
23. Wright, A.A., W.T. Molin and V.K. Nandula. 2016. Distinguishing between weedy *Amaranthus* species based on intron one sequences from the 5-enolpyruvylshikimate-3-phosphate synthase (EPSPS) gene. *Pest Management Science*. 72(12): 2347–2354. [PDF](#)
24. Nandula, V.K. 2016. Herbicide resistance in weeds: Survey, characterization and mechanisms. *Indian Journal of Weed Science*. 48(2): 128-131. [PDF](#)
25. Maroli, A.S., V.K. Nandula, S.O. Duke, and N. Tharayil. 2016. Stable isotope resolved metabolomics revealed the role of anabolic and catabolic processes in glyphosate-induced amino acid accumulation in *Amaranthus palmeri* biotypes. *Journal of Agricultural and Food Chemistry*. 64(37):7040-7048. [PDF](#)
26. Wright, A.A., V.K. Nandula, L. Grier, K.C. Showmaker, J.A. Bond, D.G. Peterson, J.D. Ray and D.R. Shaw. 2016. Characterization of fenoxaprop-p-ethyl-resistant junglerice (*Echinochloa colona*) from Mississippi. *Weed Science*. 64(4):588-595. [PDF](#)
27. Pettigrew, W.T. 2016. Cotton photosynthetic regulation through nutrient and water availability. *The Journal of Cotton Science*. 20:237-245. [PDF](#)
28. Pettigrew, W.T. 2016. Cultivar variation in cotton photosynthetic performance under different temperature regimes. *Photosynthetica*. 54(4): 502-507. [PDF](#)

29. Pettigrew, W.T., H.A. Bruns and K.N. Reddy. 2016. Growth and agronomic performance of cotton when grown in rotation with soybean. *The Journal of Cotton Science*. 20:299-308. [PDF](#)
30. Reddy, K.N. and P. Jha. 2016. Herbicide-resistant weeds: Management strategies and upcoming technologies. *Indian Journal of Weed Science*. 48(2):108-111. [PDF](#)
31. Mengistu, A., X. Yin, N. Bellaloui, A. McClure, D. Tyler and K. Reddy. 2016. Potassium and phosphorus have no effect on severity of charcoal rot of soybean. *Canadian Journal of Plant Pathology*. DOI: 10.1080/07060661.2016.1168869. [PDF](#)
32. Schielack III, V.P., J.A. Thomasson, R. Sui and Y. Ge. 2016. Harvester-based sensing system for cotton fiber quality mapping. *Journal of Cotton Science*. 20:386-393. [PDF](#)
33. Tyler, H.L., M.A. Locke, M.T. Moore, and R.W. Steinriede, Jr. 2016. Impact of conservation land management practices on soil microbial function in an agricultural watershed. *Journal of Soil and Water Conservation*. 71(5):396-403. [PDF](#)
34. Tyler, H.L., M.H. Haron, N.D. Pugh, J. Zhang, C.R. Jackson and D.S. Pasco. 2016. Bacterial components are the major contributors to the macrophage stimulating activity exhibited by extracts of common edible mushrooms. *Food and Function*. 7:4213-4221. [PDF](#)
35. Haron, M., H.L. Tyler, N. Pugh, R. Moraes, V. Maddox, C. Jackson, and D. Pasco. 2016. Activities and prevalence of proteobacteria members colonizing *Echinaceae purpurea* fully account for macrophage activation exhibited by extracts of this botanical. *Planta Medica*. 82(14):1258-1265. [PDF](#)