Crop Production Systems Research Unit
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2015 Publications

1. Bruns, H.A. 2015. Irrigation, seeding rates and row type effects on grain sorgum in the midsouth. *Agronomy Journal.* 107(1):9-12. PDF
2. Bruns, H.A. 2015. Ear leaf photosynthesis and related parameters of transgenic and non-GMO maize hybrids. *International Journal of Agronomy*. DOI:dx.doi.org/10.1155/2015/731351. 5 pgs. PDF
3. Bellaloui, N., H.A. Bruns, H.K. Abbas, A. Mengistu, D.K. Fisher, and K.N. Reddy. 2015. Effects of row-type, row-spacing, seeding rate, soil-type, and cultivar differences on soybean seed nutrition under US Mississippi Delta conditions. *PLOS ONE* . 10(6):e0129913. doi:10.1371/journal.pone.0129913. 23 pgs. PDF
4. Bellaloui, N., H.A. Bruns, H.K. Abbas, A. Mengistu, D.K. Fisher, and K.N. Reddy. 2015. Agricultural practices altered soybean seed protein, oil, fatty acids, sugars, and minerals in the Midsouth USA. *Frontiers in Plant Science.* 6 (Article 31):1-14. doi: 10.3389/fpls.2015.00031. PDF
5. Abbas, H.K., R.M. Zablotowicz, W.T. Shier, B.J. Johnson, N.A. Phillips, M.A. Weaver, C.A. Abel and H.A. Bruns. 2015. Aflatoxin and fumonisin in corn (*Zea mays*) infected by common smut *Ustilago maydis*. *Plant Disease*. 99(9):1236-1240. PDF
6. Fisher, D.K. 2015. Radio/Antenna mounting system for wireless networking under row-crop agriculture conditions. *Journal of Sensor and Actuator Networks.* 4:154-159. PDF
7. Fletcher, R.S. 2015. Testing leaf multispectral reflectance data as input into random forest to differentiate velvetleaf from soybean. *American Journal of Plant Sciences*. 6:3191-3204. PDF
8. Sudbrink, D.L., S.J. Thomson, R.S. Fletcher, F.A. Harris, P.J. English and J.T. Robbins. 2015. Remote sensing of selected winter and spring host plants of tarnished plant bug (Heteroptera: Miridae) and herbicide use strategies as a management tactic. *American Journal of Plant Sciences.* 6:1313-1327. PDF
9. Boyette, C.D., and R.E. Hoagland. 2015. Bioherbicidal potential of *Xanthomonus campestris* for controlling *Conyza canadensis*. *Biological Science and Technology.* 25(2):229-237. PDF
10. Boyette, C.D., R.E. Hoagland and K.C. Stetina. 2015. Biological control of spreading dayflower (*Commelina diffusa*) with the fungal pathogen *Phoma commelinicola*. *Agronomy.* 5:519-536. PDF
11. Weaver, M.A., R.E. Hoagland, and C.D. Boyette. 2015. Kudzu response to foliar applied herbicides. *American Journal of Plant Sciences*. 6:856-863. PDF
12. Teaster, N.D., J.A. Sparks, E.B. Blancaflor, and R.E. Hoagland. 2015. Interactions of auxinic compounds on Ca^{2+} signaling and root growth in *Arabidopsis thaliana. American Journal of Plant Sciences*. 6:2989-3000. PDF
13. Huang, Y., K.N. Reddy, S.J. Thomson, and H. Yao. 2015. Assessment of soybean injury from glyphosate using airborne multispectral remote sensing. *Pest Management Science*. 71:545-552. PDF

14. Huang, J., L. Tian, S. Liang, H. Ma, I. Becker-Reshef, Y. Huang, W. Su, X. Zhang, D. Zhu, and W. Wu. 2015. Improving winter wheat yield estimation by assimilation of the leaf area index from Landsat TM and MODIS data into the WOFOST model. *Agricultural and Forest Meteorology.* 204:106-221. PDF

15. Wei, D., Y. Huang, Z. Chunjiang and W. Xiu. 2015. Identification of seedling cabbages and weeds using hyperspectral imaging. *International Journal of Agricultural and Biological Engineering*. 8(5):65-72. PDF

16. Zhao, F., Y. Guo, Y. Huang, K.N. Reddy, Y. Zhao and W.T. Molin. 2015. Detection of the onset of glyphosate-induced soybean plant injury through chlorophyll fluorescence signal extraction and measurement. *Journal of Applied Remote Sensing*. DOI:10.1117/1.JRS.9.097098. PDF

17. Zhao, F., Y. Guo, Y. Huang, W. Verhoef, C. van der Tol, B. Dai, L. Liu, H. Zhao and G. Liu. 2015. Quantitative estimation of fluorescence parameters for crop leaves with bayesian inversion. *Remote Sensing*. 7:14179-14199. PDF

18. Huang, J. H. Ma, W. Su, X Zhang,Y. Huang, J. Pan and W. Wu. 2015. Jointly assimilating MODIS LAI and ET products into the SWAP model for winter wheat yield extimation. *IEEE Journal of Selected Topics in Applied Earth Observations and Remote Sensing*. 8(8):4060-4071. PDF

19. Nandula, V.K. and W.K. Vencill. 2015. Herbicide absorption and translocation in plants using radioisotopes. *Weed Science*. 63 (Special Issue):140-151. PDF

20. Nandula, V.K., D.H. Poston, C.H. Koger, K.N. Reddy and K.R. Reddy. 2015. Morpho-physiological characterization of glyphosate-resistant and -susceptible horseweed (*Conyza canadensis*) biotypes of US midsouth. *American Journal of Plant Sciences*. 6:47-56. PDF

21. Nandula, V.K., A.A. Wright, C.R. Van Horn, W.T. Molin, P. Westra and K.N. Reddy. 2015. Glyphosate resistance in giant ragweed (*Ambrosia trifida* L.) from Mississippi is partly due to reduced translocation. *American Journal of Plant Sciences.* 6:2104-2113. PDF

22. Ribeiro, D.N.**,** V.K. Nandula, F.E. Dayan, A.M. Rimando, S.O. Duke, K.N. Reddy and D.R. Shaw. 2015. Possible glyphosate tolerance mechanism in pitted morningglory *(Ipomoea lacunosa* L.). *Journal of Agricultural and Food Chemistry*. 63:1689-1697. PDF

23. Tehranchian, P., J.K. Norsworthy, V.K. Nandula , S. McElroy, S. Chen and R.C. Scott. 2015. First report of resistance to acetolactate-synthase-inhibiting herbicides in yellow nutsedge (*Cyperus esculentus*): confirmation and characterization. *Pest Management Science*. 71:1274-1280. PDF

24. Riar, D.S., P. Tehranchian, J.K. Norsworthy, V.K. Nandula , S. McElroy, V. Srivastava, S. Chen, J.A. Bond, and R.C. Scott. 2015. Acetolactate synthase-inhibiting, herbicide-resistant rice flatsedge (*Cyperus iria*): Cross-resistance and molecular mechanism of resistance. *Journal of Weed Science*. 63:748-757. PDF

25. Tehranchian, P., D.S. Riar, J.K. Norsworthy, V.K. Nandula , S. McElroy, S. Chen and R.C. Scott. 2015. ALS-Resistant smallflower umbrella sedge (*Cyperus difformis*) in Arkansas rice: physiological and molecular basis of resistance. *Weed Science*. 63:561-568. PDF

26. Pettigrew, W.T. 2015. Twin-row production of cotton genotypes varying in leaf shape. *The Journal of Cotton Science.* 19:319-327. PDF

27. Zeng, L. and W.T. Pettigrew. 2015. Combining ability, heritability, and genotypic correlations for lint yield and fiber quality of Upland cotton in delayed planting. *Field Crops Research.* 171:176-183. PDF

28. Reddy, K.N., C.T. Bryson and V.K. Nandula. 2015. Late-season grass weed management with in-crop and post-harvest herbicides in twin-row glyphosate-resistant soybean. *American Journal of Plant Sciences.* 6:213-218. PDF

29. Reddy, K.N. and S.O. Duke. 2015. Soybean mineral composition and glyphosate use. Pgs 369-376. *In*: Preddy, V.R. (ed.), Processing and Impact on Active Components in Food. PDF

30. Bellaloui, N., K.N. Reddy and A. Mengistu. 2015. Drought and heat stress effects on soybean fatty acid composition and oil stability. Pgs 377-384. *In*: Preddy, V.R. (ed.), Processing and Impact on Active Components in Food. PDF

31. Williams II, M.M., C.A. Bradley, S.O. Duke, J.E. Maul and K.N. Reddy. 2015. Goss's wilt incidence in sweet corn is independent of transgenic traits and glyphosate. *HortScience*. 50(12):1791-1794. PDF

32. Sui, R. and J. Baggard. 2015. Wireless sensor network for monitoring soil moisture and weather conditions. *Applied Engineering in Agriculture.* 31(2):193-200. PDF

33. Sui, R. and D.K. Fisher. 2015. Field test of a center pivot irrigation system. *Applied Engineering in Agriculture.* 31(1): 83-88. PDF

34. Sui, R., D.K. Fisher and K.N. Reddy. 2015. Yield response to variable rate irrigation in corn. *Journal of Agricultural Science.* 7(11):11-18. PDF

35. Jackson, C.R., B.W.G. Stone and H.L. Tyler. 2015. Emerging perspectives on the natural microbiome of fresh produce vegetables. *Agriculture*. 5:170-187. PDF

36. Lyn,M., H.K. Abbas, R.M. Zablotowicz. 2015. Water dispersible formulation for delivery of biocontrol fungi to reduce aflatoxin. United States Patent: US 9,011891 B2. PDF

37. Chang, P., L.L. Scharfenstein, C.D. Solorzano, H.K. Abbas, S.T. Hua, W.A. Jones, and R.M. Zablotowicz. 2015. High sequence variations in the region containing genes encoding a cellular morphogenesis protein and the repressor of sexual development help to reveal origins of *Aspergillus oryzae. International Journal of Food Microbiology.* 200: 66-71. PDF