

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

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## 2014 Publications

1. Bruns, H.A. 2014. Irrigated soybean leaf photosynthesis in the humid subtropical mid-south. *International Journal of Agronomy*. 2014. Article ID 787945; 7 pgs. doi:10.1155/2014/787945. [PDF](#)
2. Bruns, H.A. 2014. Stacked-gene hybrids were not found to be superior to glyphosate-resistant or non-GMO corn hybrids. *Crop Management*. 13:1; 6 pgs. doi:10.2134/CM-2013-0012-RS. [PDF](#)
3. Kebede, H., D.K. Fisher, R. Sui, and K.N. Reddy. 2014. Irrigation methods and scheduling in the Delta region of Mississippi: Current status and strategies to improve irrigation efficiency. *American Journal of Plant Sciences*. 5:2917-2928. [PDF](#)
4. Fletcher, R.S. 2014. Employing spatial information technologies to monitor biological control of saltcedar in West Texas. *Geocarto International*. 29(3):332-347. [PDF](#)
5. Fletcher, R.S. 2014. Applying broadband spectra to assess biological control of saltcedar in West Texas. *Geocarto International*. 29(4):383-399. [PDF](#)
6. Fletcher, R.S., A. Showler, and P.A. Funk. 2014. Employing broadband spectra and cluster analysis to assess thermal defoliation of cotton. *Computers and Electronics in Agriculture*. 105:103-110. [PDF](#)
7. Fletcher, R.S., J.R. Smith, A. Mengistu, and J.D. Ray. 2014. Relationships between microsclerotia content and hyperspectral reflectance data in soybean tissue infected by *Macrophomina phaseolina*. *American Journal of Plant Sciences*. 5:3737-3744. [PDF](#)
8. Boyette, C.D., R.E. Hoagland, and K.C. Stetina. 2014. Biological control of the weed hemp sesbania (*Sesbania exaltata*) in rice (*Oryza sativa*) by the fungus *Myrothecium verrucaria*. *Agronomy*. 4:74-89.
9. Boyette, C.D., R.E. Hoagland, M.A. Weaver, and K.C. Stetina. 2014. Interaction of the bioherbicide *Myrothecium verrucaria* and glyphosate for kudzu control. *American Journal of Plant Sciences*. 5:3943-3956. [PDF](#)
10. Teaster, N.D. and R.E. Hoagland. 2014. Characterization of glyphosate resistance in cloned *Amaranthus palmeri* plants. *Weed Biology and Management*. 14:1-10. [PDF](#)
11. Teaster, N.D. and R.E. Hoagland. 2014. Genomic stability of *Palmer amaranth* plants derived by macro-vegetative propagation. *American Journal of Plant Sciences*. 5:3302-3310. [PDF](#)
12. Boyette, C.D., H.K. Abbas, B.J. Johnson, R.E. Hoagland, and M.A. Weaver. 2014. Biological Control of the weed *Sesbania exaltata* using a microsclerotia formulation of the bioherbicide *Colletotrichum truncatum*. *American Journal of Plant Sciences*. 5:2672-2685. [PDF](#)
13. Huang, Y., W.C. Hoffman, Y. Lan, B.K. Fritz and S.J. Thomson. 2014. Development of a low-volume sprayer for an unmanned helicopter. *Journal of Agricultural Science*. 7(1):148-153. [PDF](#)

14. Deng, W., Y. Huang, C. Zhao, and X. Wang. 2014. Discrimination of crop and weeds on visible and visible/near-infrared spectrums using support vector machines, artificial neural network and decision tree. *Sensors and Transducers*. 26:26-34. [PDF](#)
15. Lee, M.A., Y. Huang, H. Yao, S.J. Thomson, and L.M. Bruce. 2014. Effects of sample storage on spectral reflectance changes in corn leaves excised from the field. *Journal of Agricultural Science*. 6(8):214-220. [PDF](#)
16. Lee, M.A., Y. Huang, H. Yao, S.J. Thomson, and L.M. Bruce. 2014. Determining the effects of storage on cotton and soybean leaf samples for hyperspectral analysis. *IEEE Journal of Selected Topics in Applied Earth Observations and Remote Sensing*. 7(6):2562-2570. [PDF](#)
17. Yuan, L., Y. Huang, R. Loraamm, C. Nie, J. Wang, and J. Zhang. 2014. Spectral analysis of winter wheat leaves for detection and differentiation of diseases and insects. *Field Crops Research*. 156:199-207. [PDF](#)
18. Zhao, F., Y. Huang, Y. Gai, K.N. Reddy, M.A. Lee, R.S. Fletcher and S.J. Thomson. 2014. Early detection of crop injury from glyphosate on soybean and cotton using plant leaf hyperspectral data. *Remote Sensing*. 6:1538-1563. [PDF](#)
19. Zhao, F., Y. Guo, Y. Huang, K.N. Reddy, M.A. Lee, R.S. Fletcher, S.J. Thomson, and H. Zhao. Early detection of crop injury from herbicide glyphosate by leaf biochemical parameter inversion. *International Journal of Applied Earth Observation and Geoinformation*. 31:78-85. [PDF](#)
20. Zhao, F., Y. Li, X. Dai, W. Verhoef, Y. Guo, H. Shang, X. Gu, Y. Huang, T. Yu, and J. Huang. 2014. Simulated impact of sensor field of view and distance on field measurements of bidirectional reflectance factors for row crops. *Remote Sensing of Environment*. 156:129-142. [PDF](#)
21. Nandula, V.K. 2014. Italian ryegrass (*Lolium perenne* ssp. *multiflorum*) and corn (*Zea mays*) competition. *American Journal of Plant Sciences*. 5:3914-3924. [PDF](#)
22. Nandula, V.K., A.A. Wright, J.A. Bond, J.D. Ray, T.W. Eubank, and W.T. Molin. 2014. EPSPS amplification in glyphosate-resistant spiny amaranth (*Amaranthus spinosus*): A case of gene transfer via interspecific hybridization from glyphosate-resistant Palmer amaranth (*Amaranthus palmeri*). *Pest Management Science*. 70:1902-1909. [PDF](#)
23. Ribeiro, D.N., Z. Pan, S.O. Duke, V.K. Nandula, B.S. Baldwin, D.R. Shaw, and F.E. Dayan. 2014. Involvement of facultative apomixis in inheritance of EPSPS gene amplification in glyphosate-resistant *Amaranthus palmeri*. *Planta*. 239:199-212. [PDF](#)
24. Pettigrew, W.T. and M.K. Dowd. 2014. Nitrogen fertility and irrigation effects on cottonseed composition. *Journal of Cotton Science*. 18:410-419. [PDF](#)
25. Pettigrew, W.T. and W.T. Molin. 2014. Impact of starter fertilizer on cotton growth, development, lint yield and fiber quality production for an early planted no-till system. *Crop Management*. 12(1): doi:10.1094/CM-2013-0012-RS. 7 pgs. [PDF](#)
26. Pettigrew, W.T., and L. Zeng. 2014. Interactions among irrigation and nitrogen fertility regimes on mid-south cotton production. *Agronomy Journal*. 106(5):1614-1622. [PDF](#)
27. Bauer, P.J., W.T. Pettigrew and B.T. Campbell. 2014. Response of four cotton genotypes to N fertilization for root hydraulic conductance and lint yield. *Journal of Cotton Science*. 18:362-366. [PDF](#)

28. Reddy, K.N., Y. Huang, M.A. Lee, V.K. Nandula, R.S. Fletcher, S.J. Thomson, and F. Zhao. 2014. Glyphosate-resistant and glyphosate-susceptible Palmer amaranth (*Amaranthus palmeri* S. Wats.): hyperspectral reflectance properties of plants and potential for classification. *Pest Management Science*. 70:1910-1917. [PDF](#)
29. Mengistu, A., H.M. Kelly, N. Bellaloui, P.R. Arelli, K.N. Reddy, and A.J. Wrather. 2014. Tillage, fungicide, and cultivar effects on frogeye leaf spot severity and yield in soybean. *Plant Diseases*. 98:1476-1484. [PDF](#)
30. Sui, R., R.K. Byler, D.K. Fisher, E.M. Barnes, and C.D. Delhom. 2014. Effect of supplemental irrigation and graded levels of nitrogen on cotton yield and quality. *Journal of Agricultural Science*. 6(2): 119-131.
31. Kebede, H., R. Sui, D.K. Fisher, K.N. Reddy, N. Bellaloui, and W.T. Molin. 2014. Corn yield response to reduced water use at different growth stages. *Agricultural Sciences*. 5:1305-1315. [PDF](#)
32. Kebede, H., D.K. Fisher, R. Sui and K.N. Reddy. 2014. Irrigation methods and scheduling in the Delta region of Mississippi: Current status and strategies to improve irrigation efficiency. *American Journal of Plant Sciences*. 5:2917-2928. [PDF](#)
33. Thomson, S.J. 2014. Evaluation of a solid stream radial nozzle on fixed-wing aircraft, for penetration of spray within a soybean canopy. *Journal of Plant Protection Research*. 54(1):96-101.
34. Thomson, S.J., Y. Huang, and L.A. Smith. 2014. Portable device to assess dynamic accuracy of global positioning systems (GPS) receivers used in agricultural aircraft. *International Journal of Agricultural and Biological Engineering*. 7(2):68-74. [PDF](#)
35. Solorzano, C.D., H.K. Abbas, R.N. Zablutowicz, P.K. Chang, and W.A. Jones. 2014. Genetic variability of *Aspergillus flavus* isolates from a Mississippi corn field. *The Scientific World Journal*. Article ID 356059; 8 pgs. [dx.doi.org/10.1155.2014/356059](http://dx.doi.org/10.1155.2014/356059).