

Crop Production Systems Research Unit
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2012 Publications

1. Bruns, H.A. 2012. Concepts in crop rotations. pp. 26-48. *In: G. Aflapui (editor) Agriculture Science. InTech Publications. Rijeka, Croatia.*
2. Bruns, H.A., M.W. Ebelhar and H.K. Abbas. 2012. Comparing single-row and twin-row corn production in the mid south. *Crop Management*. 11(1):doi:10.1094/CM-2012-0404-01-RS. [PDF](#)
3. Bruns, H.A., and L.D. Young. 2012. Raised seedbeds for soybean in twin rows increase yield over flat seedbeds. *Crop Management*. 11(1):7 pgs. doi:10.1094/CM-2012-0712-01-RS. [PDF](#)
4. Abbas, H.K., H.J. Mascagni, Jr., H.A. Bruns, W.T. Shierd, and K.E. Damanne. 2012. Effect of planting density, irrigation regimes, and maize hybrids with varying ear size on yield, and aflatoxin and fumonisin contamination levels. *American Journal of Plant Sciences*. 3:1341-1354. [PDF](#)
5. Abbas, H.K., N. Bellaloui, R. Zablutowicz, H.A. Bruns and A.M. Gillen. 2012. Corn-soybean rotation systems in the Mississippi Delta: Implications on mycotoxin contamination and soil populations of *Aspergillus flavus*. *International Journal of Agronomy* doi:10.1155/2012/93546t3 7pgs. [PDF](#)
6. Bryson, C.T. and R. Carter. 2012. Growth, reproductive potential, and control strategies for deeproot sedge (*Cyperus entreianus*). *Weed Technology*. 26(1):122-129.
7. Bryson, C.T., K.N. Reddy and J.D. Byrd, Jr. 2012. Growth, development and morphological differences among native and nonnative prickly nightshades (*Solanum* spp.) of the Southeastern United States. *Invasive Plant Science and Management* 5: 341-352. [PDF](#)
8. Fisher, D.K. 2012. Simple weighing lysimeters for measuring evapotranspiration and developing crop coefficients. *International Journal of Agricultural and Biological Engineering*. 5(3):35-43. [PDF](#)
9. Fisher, D.K. and P.J. Gould. 2012. Open-source hardware is a low-cost alternative for scientific instrumentation and research. *Modern Instrumentation*. 1(2):8-20. [PDF](#)
10. Bellaloui, N., A. Mengistu, D.K. Fisher, and C.A. Abel. 2012. Soybean seed composition as affected by drought and *Phomopsis* in phomopsis susceptible and resistant genotypes. *Journal of Crop Improvement*. 26:428-453. [PDF](#)
11. Bellaloui, N., A. Mengistu, D.K. Fisher, L.H. Zobiolo, and H.K. Abbas. 2012. Irrigation management effects of soybean diseases on seed composition in genotypes differing in their disease resistance under irrigated and nonirrigated conditions. *Nova Hedwigia*. 1:1-42.

12. Kebede, H., D.K. Fisher and L.H. Young. 2012. Determination of moisture deficient and heat stress tolerance in corn using physiological measurements and a low-cost microcontroller-based monitoring system. *Journal of Agronomy and Crop Science*. 198 (2):118–129. [PDF](#)
13. Kebede, H., H. Abbas, D.K. Fisher and N. Bellaloui. 2012. Relationship between aflatoxin contamination and physiological measurements in corn under drought and heat stress. *Toxins*. 4:1385-1403. doi:10.3390/toxins4111385. [PDF](#)
14. Bellaloui, N., J.R. Smith, A.M. Gillen, D.K. Fisher, and A. Mengistu. 2012. Effect of shade on seed protein oil fatty acids and minerals in soybean lines varying in seed germinability in the Early Soybean Production system. *American Journal of Plant Sciences*. 3:84-95. [PDF](#)
15. Hoagland, R.E., C.D. Boyette, K.C. Vaughn, N.D. Teaster and K. Stetina. 2012. Effects of *Myrothecium verrucaria* on ultrastructural integrity of kudzu (*Pueraria montana* var. *lobata*) and phytotoxin implications. *American Journal of Plant Sciences*. 3:1513-1519. [PDF](#)
16. Boyette, C.D. and R.E. Hoagland. 2012. Interactions of chemical additives, pH and temperature on conidia germination and virulence of *Colletotrichum truncatum*, a bioherbicide of *Sesbania exaltata*. *Allelopathy Journal*. 30(1): 103-116. [PDF](#)
17. Boyette, C.D., R.E. Hoagland, M.A. Weaver, and K. Stetina. 2012. Biological control potential of *Colletotrichum gloeosporioides* for coffee senna (*Cassia occidentalis*). *American Journal of Plant Sciences*. 3:430-436. [PDF](#)
18. Boyette, C. D., C.T. Bryson, R.E. Hoagland, and M.A. Weaver. 2012. Effects of simulated rainfall on disease development and weed control of the bioherbicidal fungi *Alternaria cassiae* and *Colletotrichum truncatum*. *Weed Technology*. 26: 117-121. [PDF](#)
19. Weaver, M.A., C.D. Boyette and R.E. Hoagland. 2012. Bioherbicidal activity from washed spores of *Myrothecium verrucaria*. *World Journal of Microbiology and Biotechnology*. 28:1941-1946. [PDF](#)
20. Huang, Y., S.J. Thomson, W.T. Molin, K.N. Reddy and H. Yao. 2012. Early detection of soybean plant injury from glyphosate by measuring chlorophyll reflectance and fluorescence. *Journal of Agricultural Science*. 4(5):117-125. [PDF](#)
21. Huang, Y., W. Ding, S.J. Thomson, K.N. Reddy and R.M. Zablotowicz. 2012. Assessing crop injury caused by aerially applied glyphosate drift using spray sampling. *Transactions of the American Society of Agricultural and Biological Engineers*. 55(3):725-731. [PDF](#)
22. Huang, Y., W. Zhan, B. Fritz and S. Thomson. 2012. Optimizing selection of controllable variables to minimize downwind drift from aerially applied sprays. *Applied Engineering in Agriculture*. 28(3): 307-314. [PDF](#)

23. Yao, H. Y. Huang, Z. Hruska, S.J. Thomson and K.N. Reddy. 2012. Using vegetation index and modified derivative for early detection of soybean plant injury from glyphosate. *Computers and Electronics in Agriculture*. 89:145-157. [PDF](#)
24. Jin, X., D. Streett, Y. Huang and T. Ugine. 2012. Development of a novel bioassay system to assess the effectiveness of entomopathogenic fungi against imported fire ants. *Biocontrol Science and Technology*. 22(2):233-241. [PDF](#)
25. Krutz, L.J., M.A. Locke, R.W. Steinriede, Jr., K.N. Reddy, L. Libous-Bailey and I.C. Burke. 2012. Water, sediment and metolachlor transport differences between wide- and narrow-row cotton production systems. *Journal of Soil and Water Conservation*. 67(1):8-15. [PDF](#)
26. Krutz, J.L., R.M. Zablotowicz and K.N. Reddy. 2012. Selection pressure, cropping system and rhizosphere proximity affect atrazine degrader populations and activity in s-triazine adapted soil. *Weed Science*. 60:516-524. [PDF](#)
27. Abit, M.J., D.L. Shaner, L.J. Krutz, C.M. Rainbolt, N.V. O'Connell, B.A. Faber and B.D. Hanson. 2012. Assessing simazine degradation patterns in California citrus orchards with different simazine use histories. *Air, Soil and Water Research*. 5: 69-78.
28. DeLaune, P.B., J.W. Sij, S.C. Park and L.J. Krutz. 2012. Cotton production as affected by irrigation level and transitioning tillage systems. *Agronomy Journal*. 104(4): 991-995.
29. Dillon, K.A., T.W. Walker, D.L. Harrell, L.J. Krutz, J.J. Varco, C.H. Koger and M.S. Cox. 2012. Nitrogen sources and timing effects on N loss and uptake in delayed flood rice. *Agronomy Journal*. 104(2):466-472. [PDF](#)
30. Weaver, M.A., R.M. Zablotowicz, L.J. Krutz and M.A. Locke. 2012. Microbial and vegetative changes associated with development of a constructed wetland. *Ecological Indicators*. 13:37-45. [PDF](#)
31. Ratnayaka, H., W.T. Molin, and T. Sterlilng. 2012. Comparison of physiological and antioxidant responses of *Anoda cristata* and cotton to progressive drought. *Weed Research*. 52:358-366. [PDF](#)
32. Nandula, V.K. and K.N. Reddy. 2012. Weed resistance challenges and management under herbicide resistant cropping systems. *Indian Journal of Agronomy*. 57:302-309. [PDF](#)
33. Nandula, V.K., K.N. Reddy, C.H. Koger, D.H. Poston, A.M. Rimando, S.O. Duke, J.A. Bond and D.N. Ribeiro. 2012. Multiple resistance to glyphosate and pyriithiobac in palmer amaranth (*Amaranthus palmeri*) from Mississippi and response to flumiclorac. *Weed Science*. 60:179-188. [PDF](#)
34. Eubank, T.W., V.K. Nandula, D.H. Poston and D.R. Shaw. 2012. Multiple resistance of horseweed to glyphosate and paraquat and its control with paraquat and metribuzin combinations. *Agronomy*. 2:358-370. doi:10.3390/agronomy2040358. [PDF](#)

35. Queiroz, S.C.N., C.L. Cantrell, S.O. Duke, .D.E. Wedge, V.K. Nandula, R.M. Moraes and A.L. Cerdeira. 2012. Bioassay-directed isolation and identification of phytotoxic and fungitoxic acetylenes from *Conyza canadensis*. *Journal of Agricultural and Food Chemistry*. 60:5893-5898. [PDF](#)
36. Pettigrew, W.T. and M.K. Dowd. 2012. Interactions between irrigation regimes and varieties result in altered cottonseed composition. *Journal of Cotton Science*. 16:42-52. [PDF](#)
37. Pettigrew, W.T. and W.R. Meredith, Jr. 2012. Genotypic variation in physiological strategies for attaining cotton lint yield production. *The Journal of Cotton Science*. 16: 179-189. [PDF](#)
38. Reddy, K.N. 2012. Weed control and yield comparisons of glyphosate-and glufosinate-resistant corn grown in rotation. *Journal of Crop Improvement*. 26: 364-374. [PDF](#)
39. Reddy, K.N. and V.K. Nandula. 2012. Herbicide resistant crops: History, development and current technologies. *Indian Journal of Agronomy*. 57(1):1-7 [PDF](#)
40. Duke, S.O., K.N. Reddy, K. Bu, J.V. Cizdziel. 2012. Effects of glyphosate on the mineral content of glyphosate-resistant soybeans (*Glycine max*). *Journal of Agricultural and Food Chemistry*. 60: 6764-6771. [PDF](#)
41. Sassenrath, G. R. Gaj, J. Halloran, J. Scheider. 2012. Nitrogen balance as an indicator of environmental impact: Toward sustainable agricultural production. *Renewable Agriculture and Food Systems*. doi:10.1017/S1742170512000166. 14pgs. [PDF](#)
42. Sassenrath, G., J. Schneider, A. Schmidt and A. Silva. 2012. Quality assurance of weather parameters for determining daily evapotranspiration in the humid growing environment of the Mid-South. *Journal of the Mississippi Academy of Sciences*. 57:178-192. [PDF](#)
43. Grzebisz, W., R. Gaj, G.F. Sassenrath and J.M. Halloran. 2012. Fertilizer use and wheat yield in Central and Eastern European countries from 1986-2005 and its implications for developing sustainable fertilizer management practices. *Communications in Soil Sciences and Plant Analysis*. 43:2358-2375. [PDF](#)
44. Sui, R. and R.K. Byler. 2012. Evaluation of a mass flow sensor at a gin. *Journal of Cotton Science*. 16: 27-33. [PDF](#)
45. Sui, R. and R.K. Byler. 2012. Air-bar cotton lint cleaner. *Applied Engineering in Agriculture*. 28(2):173-177 [PDF](#)
46. Sui, R., D.K. Fisher and E.M. Barnes. 2012. Soil moisture and plant canopy temperature sensing for irrigation application in cotton. *Journal of Agricultural Science* 4(12):93-105. [PDF](#)
47. Sui, R., J.A. Thomasson and Y. Ge. 2012. Development of sensor systems for precision agriculture in cotton. *International Journal of Agricultural and Biological Engineering*. 5(4):1-14. [PDF](#)

48. Thomson, S.J., C.M. Plamondon-Ouellet, S.L. Defauw, Y. Huang, D.K. Fisher and P.J. English. 2012. Potential and challenges in use of thermal imaging for humid region irrigation system management. *Journal of Agricultural Science*. 4(4):103-116. [PDF](#)