

L. JASON KRUTZ

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EDUCATION

- 2000-2004 Texas A&M University; major, Agronomy; Ph.D. 2004
- 1996-2000 University of Arkansas; major, Agronomy; M.S. 2000
- 1992-1996 University of Arkansas; major, Agronomy; B.S. 1996

RESEARCH EXPERIENCE

Research Soil Scientist, *United States Department of Agriculture, Agricultural Research Service, Southern Weed Science Research Unit*, 5/2004 to present. Responsibilities include conceiving, developing, and implementing research focused on abating agrochemical and sediment transport in Mississippi Delta row-cropping systems. Current projects include 1) sediment, herbicide, and nutrient transport in cotton production systems as affected by tillage, cover crop, and edge-of-field best management practices; 2) soybean and cotton row-spacing effects on pesticide and sediment transport; 3) elucidating effects of enhanced degradation on atrazine fate, transport, modeling, and risk assessment; and (4) developing criteria for selection of grass species to establish in filter strips including tolerance to herbicides used in the source area's weed control program and ability to promote rhizosphere degradation, plant uptake/metabolism, and soil quality. Attaining research objectives requires use of simulated and natural rainfall experiments ranging from micro-plot to field scale, various radiological methods, and competency in LC/PDA/MS/Fluorescence/ β -RAM and GC/MS/MS techniques.

Graduate Research Assistant, *Department of Soil and Crop Sciences, Texas A&M University*, 1/2000 to 5/2004. Research centered on the fate and transport of herbicide and herbicide metabolites in vegetated filter strips. Data demonstrated that 1) sorption of pesticides to vegetated filter strip constituents is a crucial retention mechanism for organic compounds transported in the dissolved phase of surface runoff; 2) the potential for subsequent transport of pesticides once retained by vegetated filter strips is reduced relative to adjacent cultivated soil due to enhanced sorption and degradation in the former; and 3) vegetated filter strips are a viable best management practice for protecting surface water quality. Major Advisor: Dr. Scott A. Senseman.

Graduate Research Assistant, *Department of Crop, Soil, and Environmental Sciences, University of Arkansas*, 1/1996 to 1/2000. Research focused on phytoremediation of pyrene contaminated soil and verified that Bermudagrass expedites the reclamation of pyrene contaminated soil by enhancing pyrene degrader numbers and activity in the rhizosphere. Major Advisor: Dr. Craig A. Beyrouthy.

TEACHING EXPERIENCE

Guest Lecturer, Environmental Fate of Herbicides, Mississippi State University, Department of Plant and Soil Sciences, 2008 to present

Introductory Soil Science Laboratory Instructor, Texas A&M University, Department of Agronomy, Fall 2002

Introductory Soil Science Drill Instructor, University of Arkansas, Department of Crop, Soil, and Environmental Sciences, Fall 1999

Introductory Soil Science Laboratory Instructor, University of Arkansas, Department of Crop, Soil, and Environmental Sciences, Fall 1998

SERVICE ACTIVITIES

National and Regional Organizations

Co-organizer of Symposium entitled “Advances in regulations and methods for measuring herbicide soil residues” at the Weed Science Society of America and Society Range Management Joint National Meeting, Denver, Colorado 2010

Chair, Environmental Quality Control Committee, Weed Science Society of America, 2008 through 2011

Chair, Poster Session, Weed Science Society of America Annual Meeting, Boulder, CO, 2010

Public Sector Representative, Mississippi Weed Science Society Board of Directors, Class of 2010

Steering Committee, Third Interagency Conference on Research in the Watersheds: Estes Park, CO, 2008

Section Chair, Soil and Environmental Aspects, Weed Science Society of America Annual Meeting, Chicago, IL, 2008

Section Chair, Soil and Environmental Aspects of Weed Science, Southern Weed Science Society Annual Meeting, Jacksonville, FL, 2008

Member, Environmental Quality Control Committee, Weed Science Society of America Annual Meeting, 2006 to present

Interim Chair, Environmental Quality Control Committee, Weed Science Society of America Annual Meeting, New York, NY, 2006

Periodically requested to review manuscripts for *Journal of Environmental Quality*, *Agronomy Journal*, *Journal of Agricultural and Food Chemistry*, *Journal of Chromatography A*, *Pest Management Science*, *Weed Science*, *Weed Technology*, *Environmental Geochemistry and Health*, *Agriculture Ecosystems and Environment*, *Journal of Environmental Management*, *Toxicological and Environmental Chemistry*, *Soil Biology and Biochemistry*, *Contaminant hydrology*, *Current Microbiology* and *Australian Journal of Soil Research*

Adjunct Faculty Positions

Assistant Professor, Mississippi State University, Department of Plant and Soil Sciences, 2008 to present

Assistant Professor, University of Arkansas, Department of Crop, Soil, and Environmental Sciences, 2008 to present

Graduate Committees

Ph.D. Candidates

Brandon Fast, University of Florida, 2008 to present

M.S. Candidates

Nathan Walker, University of Arkansas, 2008 to 2009

Kamalesh Thanappan, Mississippi Valley State University, 2004 to 2005

Visiting Scientists

Dr. Cesare Accinelli, Research Scientist, University of Bologna, Italy, 2007 and 2008

Dr. Mark Matocha, Texas A&M University, College Station, TX, 2006

MEMBERSHIP IN HONORARY ACADEMIC SOCIETIES

Gamma Sigma Delta

Sigma Xi

Phi Kappa Phi

MEMBERSHIP IN PROFESSIONAL SOCIETIES

Agrochemical Division, American Chemical Society

Environmental Chemistry Division, American Chemical Society

Soil Science Society of America

Weed Science Society of America

Southern Weed Science Society of America

Mississippi Weed Science Society

GRANTS PROCURED

Novartis Crop Protection. Effect of buffer strips on atrazine, metolachlor, and their metabolites in the dissolved phase of surface runoff. \$109,000. 5/2001-5/2003.

REFEREED PUBLICATIONS

1. Bryson, C.T., **L.J. Krutz**, G.Ervin, K.N. Reddy and J.D. Byrd, Jr. 2009. Ecotype variability and edaphic characteristics for Cogongrass (*Imperata cylindrical*) populations in Mississippi. *Invasive plant Sci. Manage.* (In progress)
2. **Krutz, L.J.**, D.L. Shaner, M.A. Weaver, R.M.T. Webb, R.M. Zablotowicz, and K.N. Reddy. 2009. Agronomic and environmental implications of enhanced atrazine degradation. *Pest Mange. Sci.* (In progress)
3. Webb, R.M.T., **L.J. Krutz**, D.L. Shaner and M.W. Sandstrom. 2009. Simulations of branched serial first order decay of pesticides. *J. Environ. Quality.* (In progress).
4. Avila, L.A., S.A. Senseman, J.L. Ullman, D.J. Lin, **L.J. Krutz**, G.N. McCauley and J.M. Chandler. 2009. Imazethapyr sorption and availability in three soils as affected by soil moisture content. *Scientia Agricola.* (In review)
5. Fast, J.B., J.A. Farrell, G.E. MacDonald and **L.J. Krutz**. 2009. Picloram and aminopyralid adsorption to soil and clay minerals. *J. Agric. Food Chem.* (In review).
6. **Krutz, L.J.**, D.L. Shaner, R.M. Zablotowicz. 2009. Enhanced degradation and soil depth effects on modeling the fate of atrazine and major metabolites. *J. Environ. Quality.* (In review).
7. Zablotowicz, R.M., K.N. Reddy, M.A. Weaver, A. Mengistu, **L.J. Krutz**, R.E. Gordon and N. Bellaloui. 2009. Cover Crops, Tillage and Glyphosate Effects on Chemical and Biological Properties of a Lower Mississippi Delta Soil and Soybean Yield. *Environ. Res.* (Accepted 12/7/2008).
8. Zablotowicz, R.M., C. Accinelli, **L.J. Krutz** and K.N. Reddy. 2009. Soil depth and tillage effects on glyphosate degradation. *J. Agric. Food Chem.* 57:4867-4871.
9. **Krutz, L.J.**, I.C. Burke, K.N. Reddy, R.M. Zablotowicz and A. J. Price. 2009. Enhanced atrazine degradation: Evidence for reduced residual weed control and a method to identify adapted soils and predict herbicide persistence. *Weed Sci.* 57:427-434.
10. Zablotowicz, R.M., **L.J. Krutz**, C. Accinelli and K.N. Reddy. 2009. Bromoxynil degradation in a Mississippi silt loam soil. *Pest. Manage. Sci.* 65:658-664.
11. **Krutz, L.J.**, M.A. Locke and R.W. Steinriede, Jr. 2009. Interactions of tillage and cover crop on water, sediment, and pre-emergence herbicide loss in cotton: implications for the control of glyphosate-resistant weed biotypes. *J. Environ. Qual.* 38:1240-1247.

12. Zablotowicz, R.M., **L.J. Krutz**, M.A. Weaver, C. Accinelli and K.N. Reddy. 2008. Glufosinate and ammonium sulfate inhibit atrazine degradation in soil. *Biol. Fertil. Soils*. 45:19-26.
13. **Krutz, L.J.**, I.C. Burke, K.N. Reddy, and R.M. Zablotowicz. 2008. Evidence for cross-adaptation between *s*-triazine herbicides resulting in reduced efficacy under field conditions. *Pest Manage. Sci.* 64:1024-1030.
14. **Krutz, L.J.**, D.L. Shaner, C. Accinelli, R.M. Zablotowicz, and W.B. Henry. 2008. Atrazine dissipation in *s*-triazine-adapted and non-adapted soil from Colorado and Mississippi: Implications of enhanced degradation on atrazine fate and transport parameters. *J. Environ. Quality*. 37:848-857.
15. Shaner, D.L., W.B. Henry, **L.J. Krutz**, and B. Hanson. 2007. Rapid assay for screening soil samples for enhanced atrazine degradation. *Weed Sci.* 55:528-535.
16. Zablotowicz, R.M., **L.J. Krutz**, K.N. Reddy, M.A. Weaver, C.H. Koger, and M.A. Locke. 2007. Rapid development of enhanced atrazine degradation in a Dundee silt loam under continuous corn and in rotation with cotton. *J. Agric. Food Chem.* 55:852-859.
17. **Krutz, L.J.**, R.M. Zablotowicz, K.N. Reddy, C.H. Koger III, and M.A. Weaver. 2007. Enhanced degradation of atrazine under field conditions correlates with a loss of weed control in the glasshouse. *Pest Manag. Sci.* 63:23-31.
18. Weaver, M.A., **L.J., Krutz**, R.M. Zablotowicz, and K.N. Reddy. 2007. Effects of glyphosate on soil microbial communities and its mineralization in a Mississippi soil. *Pest Manag. Sci.* 63:388-393.
19. **Krutz, L.J.**, C.H. Koger, M.A. Locke, and W. Steinriede. 2007. Reduced surface runoff losses of metolachlor in narrow-row compared to wide-row soybean. *J. Environ. Qual.* 36:1331-1337.
20. *Matocha, M.A.*, **L.J. Krutz**, S.A. Senseman, C.H. Koger, K.N. Reddy, and E.W. Palmer. 2006. Spray carrier pH effect on absorption and translocation of trifloxysulfuron in Palmer amaranth (*Amaranthus palmeri*) and Texasweed (*Caperonia palustris*). *Weed Sci.* 54:969-973.
21. *Matocha, M.A.*, **L.J. Krutz**, K.N. Reddy, S.A. Senseman, M.A. Locke, R.W. Steinriede, Jr., and E.W. Palmer. 2006. Foliar washoff potential and simulated surface runoff losses of trifloxysulfuron in cotton. *J. Agric. Food Chem.* 54:5498-5502.
22. Reddy, K.N., M.A. Locke, C.H. Koger, R.M. Zablotowicz, and **L.J. Krutz**. 2006. Cotton and corn rotation under reduced tillage management: Impacts on soil properties, weed control, yield, and net return. *Weed Sci.* 54:768-774.

23. **Krutz, L.J.**, T.J. Gentry, S.A. Senseman, I.L. Pepper, and D.P. Tierney. 2006. Mineralization of atrazine, metolachlor, and their respective metabolites in vegetated filter strip and cultivated soil. *Pest Manag. Sci.* 62:505-514.
24. Koger, C.H., T.W. Walker, and **L.J. Krutz**. 2006. Response of three rice (*Oryza sativa*) cultivars to planting depth, pendimethalin application, and rainfall timing after herbicide application. *Crop Prot.* 25:684-689.
25. Zablotowicz, R.M., M.A. Locke, **L.J. Krutz**, R.N. Lerch, R.E. Lizotte, S.S. Knight, R.E. Gordon, and R.W. Steinriede. 2006. Influence of watershed system management on herbicide concentrations in Mississippi Delta oxbow lakes. *Sci. Total Environ.* 370:552-560.
26. Koger, C.H., D.L. Shaner, **L.J. Krutz**, T.W. Walker, N. Buehring, W.B. Henry, W.E. Thomas, and J.W. Wilcut. 2005. Rice (*Oryza sativa*) response to drift rates of glyphosate. *Pest Manag. Sci.* 61:1161-1167.
27. **Krutz, L.J.**, S.A. Senseman, R.M. Zablotowicz, and M.A. Matocha. 2005. Reducing herbicide runoff from agricultural fields with vegetative filter strips: A Review. *Weed Sci.* 53:353-367.
28. **Krutz, L.J.**, C.A. Beyrouthy, T.J. Gentry, D.C. Wolf, and C.M. Reynolds. 2005. Selective enrichment of a pyrene degrader population and enhanced pyrene degradation in Bermudagrass rhizosphere soil. *Biol. Fert. Soils.* 41:359-364.
29. **Krutz, L.J.**, S.A. Senseman, K.J. McInnes, D.W. Hoffman, and D.P. Tierney. 2004. Adsorption and desorption of metolachlor and metolachlor metabolites in vegetative filter strip and cultivated soil. *J. Environ. Qual.* 33:939-945.
30. Lee, D.J., S.A. Senseman, J.H. Obar, J.M. Chandler, **L.J. Krutz**, G.N. McCauley, and Y.I. Kuk. 2004. Soil characteristics and water potential effects on plant-available clomazone in rice. *Weed Sci.* 52:310-318.
31. **Krutz, L.J.**, S.A. Senseman, M.C. Dozier, D.W. Hoffman, and D.P. Tierney. 2004. Infiltration and adsorption of dissolved metolachlor, metolachlor oxanilic acid, and metolachlor ethanesulfonic acid by buffalograss (*Buchloe dactyloides*) filter strips. *Weed Sci.* 52:166-171.
32. **Krutz, L.J.**, S.A. Senseman, M.C. Dozier, D.W. Hoffman, and D.P. Tierney. 2003. Infiltration and adsorption of dissolved atrazine and atrazine metabolites in buffalograss filter strips. *J. Environ. Qual.* 32:2319-2324.
33. **Krutz, L.J.**, S.A. Senseman, and R.L. Haney. 2003. Effect of Roundup Ultra on atrazine degradation in soil. *Biol. Fert. Soils* 38:115-118.

34. **Krutz, L.J.**, S.A. Senseman, and A.S. Sciumbato. 2003. Solid-phase microextraction for herbicide determination in environmental samples. *J. Chrom. A.* 999:103-121.
35. Lee, D.J., S.A. Senseman, A.S. Sciumbato, S.C. Jung, and **L.J. Krutz**. 2003. The effect of titanium dioxide alumina beads on the photocatalytic degradation of picloram in water. *J. Agric. Food Chem.* 51:2659-2664.
36. **Krutz, L.J.**, S.A. Senseman, K.J. McInnes, D.A. Zuberer, and D.P. Tierney. 2003. Adsorption and desorption of atrazine, desethylatrazine, deisopropylatrazine, and hydroxyatrazine in vegetated filter strip and cultivated soil. *J. Agric. Food Chem.* 51:7379-7384.
37. Haney, R.L., S.A. Senseman, **L.J. Krutz**, and F.M. Hons. 2002. Soil carbon and nitrogen mineralization as affected by atrazine and glyphosate. *Biol. Fert. Soils* 35:35-40.

BOOK CHAPTERS

1. Zablotowicz, R.M., K.N. Reddy, R.J. Kremer, N. Bellaloui and **L.J. Krutz**. 2009. Glyphosate effects on the assimilation of nitrogen and other plant nutrients and plant microbe interactions. Nova Press (In progress).
2. Zablotowicz, R.M., K.N. Reddy, M.A. Weaver, A. Mengistu, **L.J. Krutz**, R.E. Gordon and N. Bellaloui. 2009. Cover Crops, Tillage and Glyphosate Effects on Chemical and Biological Properties of a Lower Mississippi Delta Soil and Soybean Yield. In: Tomas H. Latos, ed. *Cover Crops and Crop Yields*, Nova Publishers, Inc. Huntington, NY; Chapter 10, pp. 265-289.

OTHER PUBLICATIONS

1. **Krutz, L.J.**, D.L. Shaner, K.N. Reddy and R.M. Zablotowicz. 2009. Predicting where enhanced atrazine degradation will occur based on soil pH and herbicide use history. Agricultural Research Service, Southern Weed Science Research Unit, Fact Sheet 2009-2 (In progress).
2. **Krutz, L.J.**, M.A. Locke, R.W. Steinriede. 2009. Cover crops reduce water, sediment, and herbicide loss in acreage requiring tillage to control glyphosate-resistant weed biotypes. Agricultural Research Service, Southern Weed Science Research Unit, Fact Sheet 2009-1 (Internal review).
3. **Krutz, L.J.**, D.L. Shaner, K.N. Reddy, R.M. Zablotowicz and L. Wiles. 2008. Enhanced atrazine degradation and implications for weed control in corn. Agricultural Research Service, Southern Weed Science Research Unit, Fact Sheet 2008-01.
4. **Krutz, L.J.** 2004. Reducing the transport of herbicides and herbicide metabolites from agricultural application zones with vegetated filter strips. Texas A&M University. 170 pp. (Dissertation)

5. **Krutz, L.J.** 2000. Rhizosphere influenced pyrene dissipation. University of Arkansas. 51 pp. (Thesis)
6. White, P.M., **L.J. Krutz**, W.D. Kirkpatrick, D.C. Wolf, C.M. Reynolds, and G.J. Thoma. 1999. Phytoremediation of petroleum contaminated soil. p. 392-406 *In* K.L. Sublette (ed.) Sixth International Petroleum Environmental Conference. 16-18 Nov. 1999. Houston, TX. The Integrated Petroleum Environmental Consortium, Tulsa, OK.

PRESENTATIONS

Invited

1. "Impact of enhanced metabolism of soil applied herbicides on modeling, leaching, and efficacy", Weed Science Society of America and Society of Range Management Joint National Meeting, Denver, Colorado 2010
2. "Environmental research overview", American Chemical Society, Delta State University, 2009
3. "Impact of tillage practices on herbicide runoff", Cotton Short Course, Mississippi State University, 2008
4. "Herbicide fate and transport as a function of edge-of-field best management practices: An overview" Mississippi State University, 2008
5. "Environmental research overview", Mississippi Valley State University, 2008
6. "What to expect from a new USDA-ARS position and ways to advance in the future", Southern Weed Science Society Annual Meeting, Nashville, TN, 2007
7. "Enhanced atrazine degradation in the Mississippi delta: Development, maintenance, and impact on weed control", Mississippi Weed Science Society Annual Meeting, Stoneville, MS, 2007
8. "Herbicide fate under Mid-South cropping systems and conservation practices". Mississippi Delta Water Research Review, Stoneville, MS, 2006
9. "Doubt cast on value of subsequent atrazine applications". April 24th issue of *Delta Farm Press* magazine, 2006
10. "Microbial activity and atrazine degradation in soil from mixtures of glyphosate and atrazine", American Phytopathological Society Conference, Charlotte, NC, 2003
11. "Effectiveness of Buffalograss [*Buchloe dactyloides* (Nutt. Engelm)] filter strips in removing dissolved atrazine and atrazine metabolites from surface runoff" at the Division of Agrochemicals at the American Chemical Society National Conference, 2003

12. "Effect of Glyphosate on Atrazine Degradation in Soil" at the Division of Agrochemicals, American Chemical Society National Conference, Orlando, FL, 2002.

Volunteered

1. Rainbolt, C.M., B.D. Hanson, A. Shrestha, D.L. Shaner, and **L.J. Krutz**. 2009. Simazine degradation rates in California central valley soils with varying simazine use histories. *Proc. Western Soc. of Weed Sci.* 62:15.
2. Shaner, D., B. Henry, M. Poteet, C. Rainbolt, B. Hanson, **J. Krutz**. 2008. Comparative rates of metabolism of atrazine, propazine, ametryn and metribuzin in 19 soils with different histories of triazine use. 5th international weed science congress, Vancouver, BC, Canada.
3. Zablotowicz, R.M., C. Accinelli, **L.J. Krutz** and M.A. Weaver. 2008. Atrazine degrading bacteria isolated from a Mississippi Delta soil expressing potential for accelerated atrazine degradation. 5th international weed science congress, Vancouver, BC, Canada.
4. **Krutz, L.J.**, D.L. Shaner, C. Accinelli, R.M. Zablotowicz, and W.B. Henry. 2008. Historical atrazine transport parameters are altered in soils exhibiting enhanced degradation. *Proc. Weed Sci. Soc. Vol. 48*.
5. Zablotowicz, R.M., C. Accinelli, **L.J. Krutz**, and K.N. Reddy. 2008. Comparative mineralization and fate of glyphosate and bromoxynil in a Dundee silt loam under different tillage management. *Proc. Weed Sci. Soc. Vol. 48*.
6. **Krutz, L.J.**, M.A. Locke and R.W. Steinriede, JR. 2008. Surface runoff losses of cotton herbicides: effects of tillage and cover crops. *Proc Southern Weed Sci. Soc. Vol. 61*.
7. **Krutz, L.J.**, C.H. Koger, M.A. Locke, and R.W. Steinriede, Jr. 2007. Foliar washoff and surface runoff losses of metolachlor in wide- and narrow-row soybean. *Proc. South. Weed Sci. Soc. Vol. 60*.
8. **Krutz, L.J.**, R.M. Zablotowicz, I.C. Burke, K.N. Reddy, C.H. Koger, and M.A. Weaver. 2007. Enhanced atrazine degradation in the Mississippi Delta: Development, maintenance, and impact on weed control. *Proc. South. Weed Sci. Soc. Vol. 60*.
9. Shaner, D.L., W.B. Henry, B.D. Hanson, and **L.J. Krutz**. 2007. A rapid assay to detect enhanced atrazine degradation in soil. *Proc. Weed Sci. Soc. Vol. 47*.

10. Zablutowicz, R.M., **L.J. Krutz**, M.A. Weaver, and K.N. Reddy. 2007. Enhanced degradation of atrazine in Mississippi Delta soil: Effects of glufosinate and ammonium sulfate on atrazine mineralization. Proc. Weed Sci. Soc. Vol. 47.
11. **Krutz, L.J.**, R.M. Zablutowicz, I.C. Burke, K.N. Reddy, C.H. Koger, and M.A. Weaver. 2007. Enhanced atrazine degradation in the Mississippi Delta: Development, maintenance, and impact on weed control. Proc. Weed Sci. Soc. Vol. 47.
12. Shaner, D.L., W.B. Henry, B.D. Hanson, and **L.J. Krutz**. 2007. A rapid assay to detect enhanced atrazine degradation in soil. Proc. West. Weed Sci. Soc. (In Press).
13. Matocha, M.A., **L.J. Krutz**, S.A. Senseman, K.N. Reddy, and C.H. Koger. 2006. Influence of spray carrier pH on the absorption and translocation of trifloxysulfuron in Palmer amaranth (*Amaranthus palmeri*) and Texasweed (*Caperonia palustris*). Proc. South. Weed Sci. Soc. Vol. 59
14. Matocha, M.A., **L.J. Krutz**, S.A. Senseman, K.N. Reddy, and C.H. Koger. 2006. Influence of spray carrier pH on the absorption and translocation of trifloxysulfuron in Palmer amaranth (*Amaranghus palmeri*) and Texasweed (*Caperonia palustris*). Texas Plant Protection Conf.
15. Matocha, M.A., **L.J. Krutz**, S.A. Senseman, K.N. Reddy, and M.A. Locke. 2006. Foliar washoff potential and surface runoff losses of trifloxysulfuron in cotton. Proc. Southern Weed Sci. Soc. Vol. 59.
16. Reddy, K.N., M.A. Locke, C.H. Koger, R.M. Zablutowicz, and **L.J. Krutz**. 2006. Conventional and glyphosate-resistant cotton-corn rotation under reduced tillage: Impact on soil properties, weed control, and yield. Proc. Weed Sci. Soc. Vol. 46.
17. **Krutz, L.J.**, R.M. Zablutowicz, K.N. Reddy, C.H. Koger, and M.A. Weaver. 2006. Rapid development of enhanced atrazine degradation in two Mississippi Delta cropping systems. Proc. Weed Sci. Soc. Ab. Vol. 46
18. **Krutz, L.J.**, R.M. Zablutowicz, K.N. Reddy, C.H. Koger, and M.A. Weaver. 2005. Rapid development of enhanced atrazine degradation in soil under two cropping systems: continuous corn and corn-cotton rotation. In SSSA Abstracts [CD-ROM], Madison, WI.
19. Zablutowicz, R.M., M.A. Locke, **L.J. Krutz**, R.E. Lerch, R.E. Lizote, S.S. Knight, and R.W. Steinriede. 2005. Herbicide concentrations in the oxbow lakes of the Mississippi Delta MSEA Project: 2000 to 2003. Proc. Weed Sci. Soc. Vol. 45.

20. Patterson, M.R., C.H. Koger, R.M. Zablotowicz, M.A. Weaver, **L.J. Krutz**, and J. Wahome. 2005. Effect of winter flooding of rice fields on weeds, and soil microbial activity and community structure. Proc. South. Weed Sci. Soc. Vol. 58.
21. Senseman, S.A., D. Lee, J.H. O'Barr, J.M. Chandler, **L.J. Krutz**, G.N. McCauley, and Y.I. Kuk. 2004. Soil characteristics and water potential effects on plant-available clomazone in rice (*Oryza sativa*). Proc. Weed Sci. Soc. Vol. 57.
22. **Krutz, L.J.**, T.J. Gentry, S.A. Senseman, D.A. Zuberer, and D.P. Tierney. 2004. Sorption and mineralization of metolachlor, metolachlor ethanesulfonic acid, and metolachlor oxanilic acid in vegetated filter strip and cultivated soil. Proc. Weed Sci. Soc. Vol. 44.
23. **Krutz, L.J.**, T.J. Gentry, S.A. Senseman, D.A. Zuberer, and D.P. Tierney. 2004. Microbiological characteristics and adsorption, desorption, and mineralization of atrazine and atrazine metabolites in vegetated filter strip and cultivated soil. Proc. South. Weed Sci. Soc. Vol. 57.
24. Lee, D.J., A.S. Sciumbato, S.A. Senseman, S. Jung, and **L.J. Krutz**. 2003. Effect of titanium dioxide alumina beads on the photocatalytic degradation of picloram in water. Abst. Papers Amer. Chem. Soc. 62:2 AGRO.
25. Lee, D.J., S.C. Jung, S.A. Senseman, A.S. Sciumbato, and **L.J. Krutz**. 2003. The effect of titanium dioxide alumina beads on the photocatalytic degradation of picloram in water. Proc. South. Weed Sci. Soc. 56:348.
26. Sciumbato, A.S., **L.J. Krutz**, G.A. Steele, D.J. Lee, and S.A. Senseman. Plant available imazethapyr in soil solution and red rice (*Oryza sativa* L.) efficacy as influenced by herbicide rate and soil moisture. Proc. South. Weed. Sci. Soc. 56:351.
27. **Krutz, L.J.**, S.A. Senseman, M.C. Dozier, D.W. Hoffman, and D.P. Tierney. 2003. Dissolved atrazine and atrazine metabolite retention in buffalograss filter strips. Proc. South. Weed Sci. Soc. 56:232.
28. **Krutz, L.J.**, S.A. Senseman, M.C. Dozier, D.W. Hoffman, and D.P. Tierney. 2002. Effectiveness of buffalograss (*Buchloe dactyloides* Nutt. Engelm) filter strips in removing dissolved atrazine and metabolites from surface runoff. Texas Plant Protection Assoc. Conf. Proc.14:31
29. Sciumbato, A.S., **L.J. Krutz**, G.L. Steele, D.J. Lee, B.V. Ottis and S.A. Senseman. 2002. Plant available imazethapyr in soil solution and red rice (*Oryza sativa* L.) efficacy as influenced by herbicide rate and soil moisture. Texas Plant Protection Assoc. Conf. Proc. 14:30.

30. **Krutz, L.J.**, S.A. Senseman, M.C. Dozier, D.W. Hoffman, and D.P. Tierney. 2002. Effectiveness of buffalograss (*Buchloe dactyloides* Nutt. Engelm) filter strips in removing dissolved atrazine and metabolites from surface runoff. Tenth Int. Congress on the Chemistry of Crop Protections. Basel, Switzerland. Abstract No. 5c-237.
31. **Krutz L.J.** and S.A. Senseman. 2002. Effectiveness of buffalograss (*Buchloe dactyloides* Nutt. Engelm) filter strips in removing dissolved atrazine and metabolites from surface runoff. Proc. South. Weed Sci. Soc. 55:184.
32. **Krutz, L.J.**, S.A. Senseman, M.C. Dozier, D.W. Hoffman, and D.P. Tierney. 2002. Effectiveness of buffalograss (*Buchloe dactyloides* Nutt. Engelm) filter strips in removing dissolved metolachlor and metolachlor metabolites from surface runoff. Proc. South. Weed Sci. Soc. 55:153.
33. **Krutz, L.J.**, R.L. Haney, and S.A. Senseman. 2002. The effect of glyphosate on atrazine degradation in soil. Weed Sci. Soc. Ab. 42:327.
34. **Krutz, L.J.**, S.A. Senseman, M.C. Dozier, D.W. Hoffman, and D.P. Tierney. 2002. Effectiveness of buffalograss filter strips in removing dissolved atrazine and metabolites from surface runoff. Abst. Papers Amer. Chem. Soc. 62:40 AGRO.
35. **Krutz, L.J.**, R.L. Haney, and S.A. Senseman. 2001. The effect of glyphosate on atrazine degradation in soil. Proc. South. Weed Sci. Soc. 54:172.
36. **Krutz, L.J.**, S.A. Senseman, and R.L. Haney. 2000. The effect of glyphosate on atrazine degradation. Texas Plant Protection Assoc. Conf. Proc. 13:(omitted)
37. **Krutz, L.J.**, S.A. Senseman, and R.L. Haney. 2000. Effect of glyphosate on atrazine degradation. Agron. Abs. 92:407.
38. **Krutz L.J.**, C.A. Beyrouthy, D.C. Wolf, and E.E. Gbur. 1999. Influence of plant species on pyrene dissipation from the rhizosphere. Agron. Abs. 91:308.
39. **Krutz, L.J.**, C.A. Beyrouthy, D.C. Wolf, and E.E. Gbur. 1999. Rhizosphere influenced pyrene degradation. p. 7. *In* Southern Branch Agronomy abstracts. ASA, Madison, WI.

HONORS AND AWARDS RECEIVED

United States Department of Agriculture, Agriculture Research Service, Mid South Area Early Career Research Scientist, 2008

Researcher of the Year, Mississippi Weed Science Society, 2007

Tom Slick Graduate Research Fellowship, Texas A&M University, 2004

Environmental Chemistry Graduate Student Award, American Chemical Society, Division of Environmental Chemistry, 2003

Young Scientists' Research Recognition Award, American Chemical Society, Division of Agrochemicals, 2003

Graduate Research Award, Department of Soil and Crop Sciences, Texas A&M University, 2003

Travel Award, American Chemical Society, Division of Agrochemicals, 2002 through 2004

Texas Water Research Institute Award, Mills Scholarship, Texas A&M University, 2002

2nd place Poster Competition, Southern Weed Science Society Conference, Houston, TX, 2002

Morris G. Merkle Scholarship, Department of Soil and Crop Sciences, 2001 through 2003

1st place Poster Competition, Texas Plant Protection Association Conference, College Station, TX, 2001 through 2002

Outstanding Masters Student, Department of Crop, Soil, and Environmental Sciences, University of Arkansas, 1999

Dale A. and Wilhelmina S. Hinkle Scholarship, 1996