

Jason P. de Koff

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EDUCATION

Ph.D. in Agronomy, Purdue University, 2008

Concentration: Environmental soil chemistry and waste management

Dissertation: Sustainable waste management: the beneficial reuse of industrial, municipal, and agricultural waste products as soil amendments

Research Advisor: Dr. Brad Lee

M.S. in Soil and Water Sciences, University of California, Riverside, 2004

Concentration: Landscape processes and soil chemistry

Thesis: Pre- and post-fire erosion of soil nutrients within a chaparral watershed

Research Advisor: Dr. Robert Graham

B.S. in Chemistry, Ithaca College, 2000

Minor in Environmental Studies

Undergraduate research project: Polystyrene photochemistry

PROFESSIONAL EXPERIENCE

Assistant Professor

6/10-Present

Tennessee State University, Nashville, TN

50% Extension/20% Teaching/30% Research

-Educate stakeholders on agricultural issues related to biofuel crops.

-Teach graduate courses in soil classification and research methods

-Conduct applied research on effects of different management practices on biofuel crop production.

Postdoctoral Associate

7/08 – 5/10

USDA-ARS, Fayetteville, AR

-Research projects focused on reuse of biosolids and water treatment residuals for agricultural-based land application and effects of organic amendments on environmental factors

Instructor

1/10 – 5/10

Northwest Arkansas Community College, Fayetteville, AR

-Lectured for Introduction to Soil Science Course

-Organized and developed lectures, laboratory experiments, and coursework

-Assisted students, graded exams and assignments

<u>Research Assistant</u> 8/04 – 6/08	Purdue University, West Lafayette, IN -Dissertation focused on (1) recycling waste foundry sand through incorporation into soil amendments and (2) analysis of compost maturity indices
<u>Research Assistant</u> 7/01 – 3/04	University of California, Riverside, CA -Conducted analyses of contaminated Salton Sea sediment to identify geochemistry of iron -Conducted analyses of hillslope erosional sediment for loss of nutrients after prescribed fire
<u>Teaching Assistant</u> 9/02 – 12/02	University of California, Riverside, CA -Taught undergraduate introductory soil science laboratory -Organized and developed new coursework, assisted students with questions, explained procedures, and graded lab reports
<u>Lab Technician</u> 5/00 – 6/01	Cornell University, Ithaca, NY -Purified plasmids, prepared samples for PCR reaction and sequencing, synthesized oligonucleotides with QA/QC using UV-Vis and mass spectrometry

PROFESSIONAL MEMBERSHIPS

American Society of Agronomy (ASA), 2007 – Present
Soil and Water Conservation Society (SWCS), 2010 – 2011
Soil Science Society of America (SSSA), 2003 – Present

PROFESSIONAL DEVELOPMENT

Vice-chair for American Society of Agronomy community, 2013-2014
eLearn course development certification, 2012
Faculty Cultural Roadmap training, 2012
Website Development Workshop, 2012
Co-Leader within eXtension Farm Energy CoP, 2012
Reviewer for Transactions of the ASABE, SSSAJ, JEQ
Golden Opportunity Scholars Mentor, 2011
NIFA grantsmanship workshop, 2011
Sustainable feedstocks for advanced biofuels workshop, 2010
Preparing future faculty training course, 2007

GRANTS RECEIVED

PI, USDA-NIFA Capacity Building Grant, Building Extension Capacity Using a Mobile Biodiesel Production Platform. Award number 2012-38821-20283, \$249,744, Project duration 2012-2015.

Co-PI, USDA-NIFA Capacity Building Grant, Identification and modulation of functional protein association networks for drought tolerance in switchgrass. Award number 2012-38821-19989, \$499,995, Project duration 2012-2015.

Co-PI, USDA-NIFA Capacity Building Grant, Biofuel Education and Training Program with Infusion of Foundation Concepts and Outreach. Award number 2013-38820-21450, \$150,000, Project duration 2013-2015.

Co-PI, USDA 2501 Outreach Assistance to Socially Disadvantaged Farmers and Ranchers (OASDFR) Competitive Grants Program, Award number 59-2501-11-022, \$400,000, Project duration 2011-2013.

HONORS AND AWARDS

TSU College of Agriculture Growing Service Award, 2012

Purdue University Agronomy Extension Assistantship, 2007

Gamma Sigma Delta Agricultural Honor Society, Purdue University, 2006

George D. Scarseth Scholarship, 2005

Dean's Graduate Fellowship at University of California, Riverside, 2001

Presidential Merit Scholarship, 1996

National Honors Society, 1996

RESEARCH PUBLICATIONS AND PRESENTATIONS

Research/Refereed Publications:

de Koff, J.P., P.A. Moore, Jr., R.D. Williams, R. Young, and P.J.A. Kleinman. 2013. Utilizing water treatment residuals to reduce phosphorus runoff from biosolids. *J. Environ. Sci. and Eng. A* 2:405-417.

de Koff, J.P., P.A. Moore, Jr., S.J. Formica, M. Van Eps, and P.B. DeLaune. 2011. Effects of pasture renovation on hydrology, nutrient runoff, and forage yield. *J. Environ. Qual.* 40:320-328.

de Koff, J.P., B.D. Lee, R.S. Dungan, and J.B. Santini. 2010. Effect of compost-, sand-, or gypsum-amended waste foundry green sands on turfgrass yield and nutrient content. *J. Environ. Qual.* 39:375-383.

de Koff, J.P., B.D. Lee, and R.S. Dungan. 2008. Amelioration of physical strength in waste foundry green sands for reuse as a soil amendment. *J. Environ. Qual.* 37:2332-2338.

de Koff, J.P., M.A. Anderson, and C. Amrhein. 2008. Geochemistry of iron in the Salton Sea, California. *Hydrobiologia* 604:111-121.

Dungan, R.S., B.D. Lee, P. Shouse, and J.P. de Koff. 2007. Saturated hydraulic conductivity of soils blended with waste foundry sands. *Soil Science* 172(10):751-758.

de Koff, J.P., R.C. Graham, K.R. Hubbert, and P.M. Wohlgemuth. 2006. Pre- and post-fire erosion of soil nutrients within a chaparral watershed. *Soil Science* 171(12):915-928.

Presentations:

de Koff, J.P., and A. Allison. 2013. Harvest timing and switchgrass quality in Tennessee. ASA, CSSA, and SSSA 2013 International Annual Meetings, Tampa, FL, Nov. 3-6, 2013.

Allison, A., J.P. de Koff. 2013. Switchgrass for Bioenergy: optimal harvest timing for enhanced feedstock quality. Tennessee State University 34th Annual University-Wide Research Symposium, Nashville, TN, Apr. 1-5, 2013. **2nd place graduate student presentation division award**

Dungan, R.S., J.P. de Koff, B.D. Lee. 2012. Assessment of physical strength in foundry green sands and impact on turfgrass yields in manufactured soil blends. **Invited paper**, 5th Foundry Congress of Latin America, Buenos Aires, Argentina, Nov. 15-17, 2012.

de Koff, J.P., and A. Allison. 2012. Changes in switchgrass nutrients and quality characteristics during growth and senescence. **Invited speaker**, University of Tennessee seminar, Knoxville, TN, Nov. 5, 2012.

de Koff, J.P., and A. Allison. 2012. Effect of harvest date on switchgrass quality for bioenergy. 2012 Sun Grant Initiative National Conference: Science for Biomass Feedstock Production and Utilization, New Orleans, LA, Oct. 2-5, 2012.

Allison, A., J.P. de Koff. 2012. Identifying strategies for enhancing switchgrass quality for use as a bioenergy feedstock. Tennessee State University 34th Annual University-Wide Research Symposium, Nashville, TN, Mar. 26-30, 2012.

de Koff, J.P., P.A. Moore, Jr., D. Pote, S.J. Formica, M. Van Eps, and P. DeLaune. 2010. Effects of pasture renovation on hydrology, nutrient runoff, and forage yield. ASA, CSSA, and SSSA 2010 International Annual Meetings, Long Beach, CA, Oct. 31-Nov. 4, 2010.

Moore, Jr., P.A., J. de Koff, P. Kleinman, R. Williams, and R. Young. 2010. Reducing phosphorus runoff from biosolids with water treatment residuals. ASA, CSSA, and SSSA 2010 International Annual Meetings, Long Beach, CA, Oct. 31-Nov. 4, 2010.

- Moore, Jr., P.A., J.P. de Koff, R.D. Williams, R. Young, and P.J. Kleinman. 2010. Reducing phosphorus runoff from biosolids with water treatment residuals. 21st Century Watershed Technology: Improving Water Quality and Environment Conference Proceedings, 21-24 February 2010, Universidad EARTH, Costa Rica
- de Koff, J.P., B.D. Lee, S.A. Quideau, S.-W. Oh. 2008. Assessment of compost maturity indices for a high salt/high pH compost. Soil Science Society of America Annual Meeting, Houston, TX.
- de Koff, J.P., P.A. Moore, Jr., R. Williams, R. Young, D. Parker, A. Sharpley. 2008. Reducing phosphorus runoff from biosolids with water treatment residuals. Soil Science Society of America Annual Meeting, Houston, TX.
- de Koff, J.P., B.D. Lee, and R.S. Dungan. 2007. Amelioration of waste foundry sand with compost. Soil Science Society of America Annual Meeting, New Orleans, LA.
- de Koff, J.P., B.D. Lee, and R.S. Dungan. 2006. Amendment of high strength properties of waste foundry sands with gypsum. Soil Science Society of America Annual Meeting, Indianapolis, IN.
- de Koff, J.P., B.D. Lee, and R.S. Dungan. 2006. Chemical and mineralogical properties of iron and aluminum waste green foundry sands. World Congress of Soil Science, Philadelphia, PA.
- de Koff, J.P., B.D. Lee, and R.S. Dungan. 2005. Chemical and mineralogical properties of iron and aluminum waste green foundry sands. Soil Science Society of America Annual Meeting, Salt Lake City, UT.
- de Koff, J.P., R.C. Graham, K. Hubbert, and P. Wohlgenuth. 2003. Erosion of soil nutrients in pre- and post-fire chaparral by watershed position. Soil Science Society of America Annual Meeting, Denver, CO.

OUTREACH PUBLICATIONS AND PRESENTATIONS

Publications (refereed):

- J.P. de Koff. 2014. Maximizing the biodiesel process. Tennessee State University Cooperative Extension Service, ANR-B8. Available at:
<http://www.tnstate.edu/extension/documents/Maximizing%20the%20Biodiesel%20Process.pdf>

- Link, R., J.P. de Koff. 2014. Cool-season pasture weeds. Tennessee State University

- Cooperative Extension Service, ANR-B7. Available at:
<http://www.tnstate.edu/extension/documents/Fact%20Sheet%20-%20Cool-season%20weeds.pdf>
- Link, R., J.P. de Koff. 2014. Warm-season pasture weeds. Tennessee State University Cooperative Extension Service, ANR-B6. Available at:
<http://www.tnstate.edu/extension/documents/Fact%20Sheet%20-%20Warm-season%20weeds.pdf>
- de Koff, J.P. 2013. Using audience response devices for Extension programming. Journal of Extension 51(3):3TOT4 Available at:
<http://www.joe.org/joe/2013june/tt4.php>
- de Koff, J.P. 2013. Small-scale biodiesel production. Tennessee State University Cooperative Extension Service, ANR-B5. Available at:
<http://www.tnstate.edu/extension/documents/Small%20Scale%20Biodiesel%20Production.pdf>
- de Koff, J.P. 2013. Native warm-season perennial grasses for drought management in forage production. Tennessee State University Cooperative Extension Service, ANR-B4. Available at:
<http://www.tnstate.edu/extension/documents/Native%20warm%20season%20grasses%20for%20drought%20management.pdf>
- de Koff, J.P. 2012. Bioenergy from agriculture. Tennessee State University Cooperative Extension Service, ANR-B3. Available at:
<http://www.tnstate.edu/extension/documents/Bioenergy.pdf>
- de Koff, J.P., D.S. Pitchay, and J.O. Joshua. 2012. Leveraging university diversity to reach potential immigrant farmers. Journal of Extension 50(4) Article IW1.
- de Koff, J.P., and C. Robbins. 2012. Calibrating seed drill seeding rates for native warm-season grasses. Tennessee State University Cooperative Extension Service, ANR-B2. Available at:
<http://www.tnstate.edu/extension/documents/Calibrating%20Seed%20Drill.pdf>
- de Koff, J.P., and D.D. Tyler. 2011. Improving switchgrass yields for bioenergy production. Tennessee State University Cooperative Extension Service, ANR-B1; University of Tennessee Cooperative Extension Service, W271.
<http://www.tnstate.edu/agriculture/documents/W271.pdf>
- de Koff, J.P., B.D. Lee, and M.V. Mickelbart. 2008. Household composting: composting with worms. Purdue University Cooperative Extension Service. HENV-104-W.

de Koff, J.P., B.D. Lee, and A.P. Schwab. 2007. Avoiding arsenic exposure from treated lumber around the home. Purdue University Cooperative Extension Service. HENV-100-W.

de Koff, J.P., B.D. Lee, and A.P. Schwab. 2007. Protecting your family from lead in the home. Purdue University Cooperative Extension Service. HENV-101-W.

de Koff, J.P., B.D. Lee, and P.L. Ziemer. 2007. Radon: how to assess the risks and protect your home. Purdue University Cooperative Extension Service. HENV-102-W.

de Koff, J.P., B.D. Lee, and M.V. Mickelbart. 2007. Household composting: methods and uses for compost. Purdue University Cooperative Extension Service. HENV-103-W.

Proceedings Paper:

Hawkins, S., J. de Koff, Z. Helsel. 2012. Bioenergy education and outreach through eXtension.org. Proceedings from Sun Grant National Conference: Science for Biomass Feedstock Production and Utilization, New Orleans, LA.
www.sungrant.tennessee.edu/NatConference/

Outreach Presentations:

de Koff, J.P., C. Robbins, R. Link. 2013. Mobile biodiesel demonstration. Tennessee State Fair, Nashville, TN 6 Sept. – 15 Sept. 2013.

de Koff, J.P., C. Robbins. 2013. Mobile biodiesel demonstration. 9th Annual Small Farm Expo, Nashville, TN, 18 July, 2013.

de Koff, J.P. 2013. Small-scale biodiesel production. Small Farm Outreach and Assistance Program, Nashville, TN, 27 February – March 1, 2013.

de Koff, J.P. 2013. Native warm-season grasses for drought management. Small Farm Outreach and Assistance Program, Nashville, TN, 27 February – March 1, 2013.

de Koff, J.P. 2013. Small-scale biodiesel production. TSU Extension Virtual Coffee Shop Webinar, Nashville, TN, February 2013.

de Koff, J.P. 2013. Native warm-season grasses for forage and bioenergy. Wilson County Extension Meeting, Lebanon, TN, February 2013.

de Koff, J.P. 2012. Using student response clickers to maximize impact and evaluation of Extension presentations to stakeholders. American Society of Agronomy Annual Meeting, 21-24 Oct., Cincinnati, OH.

de Koff, J.P. 2012. Bioenergy programming needs in Tennessee. 6th National Small

- Farm Conference, Memphis, TN, Sept. 18-20, 2012.
- de Koff, J.P. 2012. ABCs of Bio-Fuel. **Invited Speaker**, Association of Extension Administrators Extension Conference, 24-28 June, Memphis, TN.
- de Koff, J.P. 2012. Biodiesel feedstocks and production. Franklin County Extension Meeting, Winchester, TN, May 2012.
- de Koff, J.P. 2012. Native warm season grasses for forage and bioenergy. Giles County Cattleman's Association Field Day, Lynnville, TN, March 2012.
- de Koff, J.P. 2012. Using switchgrass for forage and biofuel production. Small Farm Outreach and Assistance Program, Nashville, TN, 22-24 February.
- de Koff, J.P. 2012. Using switchgrass for forage and biofuel production. TSU Extension Virtual Coffee Shop Webinar, Nashville, TN, January 2012.
- de Koff, J.P. 2011. Switchgrass: forage and biofuel production. 2nd Annual Smith County Beef Day, Carthage, TN, October 2011.
- de Koff, J.P. 2011. Using switchgrass for forage and biofuel production. Lawrence County Beef Producers Meeting, Lawrenceburg, TN, June 2011.
- de Koff, J.P. 2011. Growing a hummingbird garden. Tennessee State University Gardening Program, Nashville, TN, May 2011.
- de Koff, J.P. 2011. Tomato production. Tennessee State University Gardening Program, Nashville, TN, April 2011.
- de Koff, J.P. 2011. Composting for the garden. Tennessee State University Gardening Program, Nashville, TN, March 2011.
- Pitchay, D., and J.P. de Koff. 2011. Get to know your soil. Tennessee State University Gardening Program, Nashville, TN, Feb. 2011.
- de Koff, J.P. 2011. The DIRT on Soils. Tennessee Master Gardeners Winter School, UT Cooperative Extension Service, Murfreesboro, TN, Feb. 2011.
- de Koff, J.P. 2011. Switchgrass production for bioenergy. Montgomery County Extension Meeting, Clarksville, TN, Feb. 2011.
- de Koff, J.P. 2011. Switchgrass production for biofuels. 6th Annual Rutherford County Agriculture Seminar, Murfreesboro, TN, Feb. 2011.
- de Koff, J.P. Composting: a natural method for creating natural habitat. Habitat

Stewards Training Workshop, Indiana Wildlife Federation, Fishers, IN. March 2008.

de Koff, J.P., B.D. Lee, and R.S. Dungan. Amendment of high strength properties of waste foundry sands with gypsum. Indiana Cast Metals Association, Indianapolis, IN. November 2006.

de Koff, J.P., and B.D. Lee. Beneficial reuse of foundry sands. Indiana Cast Metals Association Board Meeting, Indianapolis, IN. May 2005.