**Jose German Guzman**

Assistant Professor in Department of Agriculture, Horticulture, and Plant Science

Soil Management Scientist at Dakota Lakes Research Farm

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EDUCATION\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**Iowa State University, Ames, IA**

Ph.D. in Soil Sciences 2009-2013

Area of concentration: Soil Management

Dissertation: “Evaluation of residue management practices effects on corn productivity, soil quality, and greenhouse gas emissions”

**Iowa State University, Ames, IA**

M.S. in Soil Sciences 2006-2008

Area of concentration: Soil Management

Thesis: “Effects of Landscape Position and Age of Reconstructed Prairies in Previously Cultivated Land on Soil Carbon Dynamics and Physical Properties”

**Kansas State University, Manhattan, KS**

B.S. in Agronomy 2003-2005

Area of concentration: Plant Science and Biotechnology

Secondary major: Natural Resources and Environmental Sciences

Honors Thesis: “Correlation between Commercially Available Soil Test Kits and Certified Soil Laboratory Procedures”

ACADEMIC AND RESEARCH EXPERIENCE\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**The Ohio State University, Columbus, OH**

Carbon Management and Sequestration Center/ Dr. Rattan Lal 2013 - 2017

* Primary research on managing bioenergy crops (i.e. miscanthus, corn, meadow) and improving soil and water quality on marginal lands.
* Assessing land management impacts onto large watersheds using hydrological modeling (SWAT).
* Teaching assistant and lab instructor for “Environmental Soil Physics” course.
* Instructor for “Soil Resource Management”.

**Iowa State University, Ames, IA**

Soil Management Research Assistant/ Dr. Mahdi Al-Kaisi 2006 - 2012

* Involved with Iowa Learning Farm project which increases awareness and adoption of conservation systems and ethics in agriculture production.
* Work on assessing cover crops effectiveness to minimize soil erosion and nitrate leaching.
* Ph.D. work on interaction effects of corn residue removal, nitrogen fertilization, and tillage practices on corn production, greenhouse gas emissions, soil carbon dynamics, and nutrient cycling.
* Master’s work on landscape position, time, and management practices impacts on soil carbon sequestration in reconstructed tall-grass prairies and cropland.

**Kansas State University, Manhattan, KS**

Undergraduate Research Assistant/ Dr. Chad Godsey 2003 - 2006

* Working with Citizen Science Program promoting soil and water testing for local farmers and community members to enhanced natural resource stewardship.
* Field and lab research assistant primary working with tillage effects on soil carbon, nitrogen, infiltration, water stable aggregates, and pH.
* Honors project on correlation between commercially available soil test kits and certified soil laboratory procedures.

**Kansas State University Soil & Cropping Systems Lab; Manhattan, KS**

Entomologist Research Assistant/ Dr. Lawrent Buschman 1998 - 2003

* Setting up new experiments dealing with biological control and other Integrated Pest Management practices in corn and soybean pest.
* Developing new scouting procedures for soybean stem borer for farmers and researchers.

Awards and honors\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

* Invited speaker on “Miscanthus production for bioenergy on marginal land” at Meiji University, Japan (2015)
* Journal Article Editor’s Choice Award, Soil and Water Conservation Society (2014)
* Research Excellence Award, at ISU (2012)
* Invited presenter at the Scaling Root Processes: Global Impacts Workshop in Arlington Virginia (2012)
* Department of Agronomy Endowment Assistantship, at ISU (2009-2012)
* North Central Region Sustainable Agriculture Research and Education-SARE Graduate Student award (2009-2011)
* The Land Institute Graduate Research Fellowship (2007-2008)
* McNair Scholar at KSU (2005-2006)
* Undergraduate Research Assistant Scholar at KSU (2004-2005)
* Udall Scholar (2003-2004)

Professional MEMBERSHIPs\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

American Society of Agronomy

Crop Science Society of America

Soil Science Society of America

**Publications in refereed journals**

Guzman, J. G., Ussiri, D., Lal, R. Greenhouse gas emissions as affected by land-use changes

from marginal land to bioenergy crop production. Under revisions from Land Degradation

& Development.

Guzman, J. G., Ussiri, D., Lal, R. Soil physical properties as affected by land-use changes

from marginal land to bioenergy crop production. Submitted to Land Degradation

& Development.

Guzman, J.G., Ussiri, D., Lal, R. Bioenergy crop production on reclaimed mine land in the north

Appalachian region. To be submitted to Biomass and Bioenergy.

Yadav, S.S., Guzman, J.G., Lal, R. Comparing management effects on soil organic carbon,

structure, and water retention in corn-soybean and vegetable production systems in central

Ohio. Submitted to International Journal of Agricultural Sciences

Yadav, S.S., Guzman, J.G., Lal, R. Soil organic carbon and nitrogen storage in corn-soybean and

vegetable production in central Ohio. Submitted to International Journal of Agricultural

Sciences.

Guzman, J. G., Al-Kaisi, M., Parkin, T. 2015. Greenhouse Gas Emissions Dynamics as

Influenced by Corn Residue Removal in Continuous Corn System. Soil Science Society of

America Journal 79 (2) 612-625

Guzman, J.G., Lal, R. 2015. Miscanthus plantations in Reclaimed Mine Soils. Encyclopedia of

Soil Science.

Guzman, J. G., Lal, R. 2014. Miscanthus and switchgrass feedstock potential for bioenergy and

carbon sequestration on minesoils. Biofuels, 5(3), 313-329

Guzman, J. G., Al-Kaisi, M. M. 2014. Residue Removal and Management Practices Effects on

Soil Environment and Carbon Budget. Soil Science Society of America Journal, 78(2), 609-

623

Guzman, J. G., Lal, R., Byrd, S., Apfelbaum, S. I., & Thompson, R. L. 2014. Carbon life cycle

assessment for prairie as a crop in reclaimed mine land. Land Degradation & Development

Al-Kaisi, M. M., Elmore, R. W., Guzman, J. G., Hanna, H. M., Hart, C. E., Helmers, M. J., ... &

Sawyer, J. E. 2013. Drought impact on crop production and the soil environment: 2012

experiences from Iowa. Journal of Soil and Water Conservation, 68(1), 19A-24A

Al-Kaisi, M. M., Guzman, J. G. 2013. Effects of tillage and nitrogen rate on decomposition of

transgenic Bt and near-isogenic non-Bt maize residue. Soil and Tillage Research, 129, 32-39

Al-Kaisi, M., Fenton, T., Guzman, J.G., Oneal, B. 2012. Development of a Soil Carbon Index for

Iowa Mineral Soils. Jour. Iowa Acad. Sci. 119(1–4):1–7

Guzman, J. G., and M. M. Al-Kaisi. 2011. Landscape position effect on selected soil physical

properties of reconstructed prairies in southcentral Iowa. Journal of Soil and Water

Conservation 66(3), 183-191

Guzman, J. G., M. Al-Kaisi. 2010. Soil carbon dynamics and carbon budget of newly

reconstructed tall-grass prairies in South Central Iowa. Journal of Environmental Quality (39)

136-146

Guzman, J. G., M. Al-Kaisi. 2010. Landscape position and age of reconstructed prairies system

effect on soil organic carbon sequestration rate and aggregate associated carbon. Journal of

Soil and Water Conservation (65) 9-21

Guzman, J. G., C. Godsey, G. Pierzynski, D. Whitney, R. Lamond. 2006. Effects of tillage and

nitrogen management on soil physical and chemical properties after 23 years of continuous

sorghum. Soil and Tillage Research (91) 199-206

**Extension Publications and book chapters**

Guzman, J.G., Mohammad, G. 2016. Agroecosystem net primary productivity (NPP) and carbon

footprint. Soil Health and Intensification of Agroecosystems. Chapter 9. Eds. Al-Kaisi,

M., Lowery, B. Elsevier.

Arriaga, F., Guzman, J.G., Lowery, B. 2016. Conventional agricultural production systems and

soil functions. Soil Health and Intensification of Agroecosystems. Chapter 4. . Eds. Al-Kaisi,

M., Lowery, B. Elsevier.

Al-Kaisi, M., Guzman, J.G. 2013. Managing crop residue removal and soil quality

changes. Cooperative Extension Service, Iowa State University of Science and

Technology. PM 3052A

Al-Kaisi, M., Guzman, J.G. 2013. Managing crop residue removal and soil organic

matter. Cooperative Extension Service, Iowa State University of Science and

Technology. PM 3052B

Al-Kaisi, M., Guzman, J.G. 2007. Residue removal and potential environmental consequences.

Integrated Crop Management 498(7) 122-123

Al-Kaisi, M, Guzman, J.G. 2007. How residue removal affects nutrient cycling. Integrated Crop

Management 498(11) 157-18

Buschman, L. Qureshi, J., Guzman, J.G., Sloderbeck, P., Ramaswamy, M., Higgins, R. 2002.

Dispersal of dye-marked European and Southwestern corn borer moths in and around an

irrigated cornfield in SW Kansas. Southwest Kansas Research-Extension Center Field Day

Report, Kansas State University, Report of Progress #895 46-51