

## CURRICULUM VITAE

### NAME

Fonte, Steven John

### ADDRESS

Soil and Crop Sciences  
College of Agricultural Sciences

Plant Sciences

### PHONE

(970) 491-3410

### EDUCATION

2010 Ph D, University of California, Davis

2003 MS, Oregon State University

1998 BS, University of California, Davis

### ACADEMIC POSITIONS

August 3, 2015 - Present Assistant Professor, Dept. Soil and Crop Sciences, Colorado State University.

September 2013 - July 2015 Project Scientist / Lecturer, Dept. of Plant Sciences, University of California - Davis.

June 2012 - August 2013 Researcher, International Center for Tropical Agriculture.

June 2010 - June 2012 Postdoctoral Researcher, International Center for Tropical Agriculture.

March 2010 - June 2010 Postdoctoral Researcher, Dept. Land, Air, Water and Resources, University of California - Davis.

September 2005 - March 2010 Graduate Student Researcher, Dept. of Plant Sciences, University of California - Davis.

August 2003 - September 2005 Research Technician, University of California Davis.

September 2000 - April 2003 Graduate Student Researcher, Oregon State University.

### PUBLISHED WORKS

#### **Refereed Journal Articles**

Blankinship, J., Fonte, S. J., Six, J., Schimel, J. P. Biotic versus abiotic controls on soil aggregate stability in a seasonally dry ecosystem. *submitted to Geoderma*.

LaHue, G. T., Adviento-Borbe, M. Arlene, Linquist, B. A., van Kessel, C., Fonte, S. J. Fertilizer memory effects increase N<sub>2</sub>O emissions from zero N controls: implications for estimating fertilizer-induced emission factors. *in revision for Journal of Environmental Quality*.

- Sanabria, C., Dubs, F., Lavelle, P., Fonte, S. J., Barot, S. Influence of Regions, Land Uses and Soil Properties on Termite and Ant Communities in Agricultural Landscapes of the Colombian Llanos. *in revision for European Journal of Soil Biology*.
- Nesper, M., Bünemann, E. K., Fonte, S. J., Rao, I. M., Velásquez, J. E., Ramírez, B., Hegglin, D., Frossard, E., Oberson, A. (2015). Pasture degradation decreases organic P content of tropical soils due to soil structural decline. *Geoderma*, 257-258, 123-133.
- Sanabria, C., Lavelle, P., Fonte, S. J. (2014). Ants as indicators of soil-based ecosystem services in agroecosystems of the Colombian Llanos. *Applied Soil Ecology*, 84, 24–30.
- Fonte, S. J., Nesper, M., Hegglin, D., Velásquez, J. E., Ramirez, B., Rao, I. M., Bernasconi, S. M., Bünemann, E. K., Frossard, E., Oberson, A. (2014). Pasture degradation impacts soil phosphorus storage via changes to aggregate-associated soil organic matter in highly weathered tropical soils. *Soil Biology and Biochemistry*, 68, 150–157.
- Lavelle, P., Rodríguez, N., Arguello, O., Bernal, J., Botero, C., Chaparro, P., Gómez, Y., Gutiérrez, A., del Pilar Hurtado, M., Loaiza, S., others (2014). Soil ecosystem services and land use in the rapidly changing Orinoco River Basin of Colombia. *Agriculture, Ecosystems & Environment*, 185, 106–117.
- Hudson, L. N., Newbold, T., Contu, S., Hill, S. L., Lysenko, I., De Palma, A., Phillips, H. R., Senior, R. A., Bennett, D. J., Booth..., H., others, a. 5. m. a. (2014). The PREDICTS database: a global database of how local terrestrial biodiversity responds to human impacts. *Ecology and Evolution*, 4(24), 4701–4735.
- Lubbers, I. M., van Groenigen, K. J., Fonte, S. J., Six, J., Brussaard, L., van Groenigen, J. W. (2013). Greenhouse-gas emissions from soils increased by earthworms. *Nature Climate Change*, 3(3), 187–194.
- Rousseau, L., Fonte, S. J., Téllez, O., Van der Hoek, R., Lavelle, P. (2013). Soil macrofauna as indicators of soil quality and land use impacts in smallholder agroecosystems of western Nicaragua. *Ecological Indicators*, 27, 71–82.
- Fonte, S. J., Vanek, S. J., Oyarzun, P., Parsa, S., Carolina Quintero, D., Rao, I. M., Lavelle, P. (2012). 4 Pathways to Agroecological Intensification of Soil Fertility Management by Smallholder Farmers in the Andean Highlands. *Advances in agronomy*, 116, 125.
- Kearney, S., Fonte, S. J., Salomon, A., Six, J., Scow, K. M. (2012). Forty percent revenue increase by combining organic and mineral nutrient amendments in Ugandan smallholder market vegetable production. *Agronomy for sustainable development*, 32(4), 831–839.
- Fonte, S. J., Quintero, D. C., Velásquez, E., Lavelle, P. (2012). Interactive effects of plants and earthworms on the physical stabilization of soil organic matter in aggregates. *Plant and soil*, 359(1-2), 205–214.
- Velásquez, E., Fonte, S. J., Barot, S., Grimaldi, M., Desjardins, T., Lavelle, P. (2012). Soil macrofauna-mediated impacts of plant species composition on soil functioning in Amazonian pastures. *Applied soil ecology*, 56, 43–50.
- Schowalter, T., Fonte, S. J., Geaghan, J., Wang, J. (2011). Effects of manipulated herbivore inputs on nutrient flux and decomposition in a tropical rainforest in Puerto Rico. *Oecologia*, 167(4), 1141–1149.
- Briar, S. S., Fonte, S. J., Park, I., Six, J., Scow, K., Ferris, H. (2011). The distribution of nematodes and soil microbial communities across soil aggregate fractions and farm management systems. *Soil Biology and Biochemistry*, 43(5), 905–914.

- Smukler, S., Sanchez-Moreno, S., Fonte, S. J., Ferris, H., Klonsky, K., O'geen, A., Scow, K., Steenwerth, K., Jackson, L. (2010). Biodiversity and multiple ecosystem functions in an organic farmscape. *Agriculture, ecosystems & environment*, 139(1), 80–97.
- Fonte, S. J., Barrios, E., Six, J. (2010). Earthworm impacts on soil organic matter and fertilizer dynamics in tropical hillside agroecosystems of Honduras. *Pedobiologia*, 53(5), 327–335.
- Fonte, S. J., Six, J. (2010). Earthworms and litter management contributions to ecosystem services in a tropical agroforestry system. *Ecological Applications*, 20(4), 1061–1073.
- Fonte, S. J., Barrios, E., Six, J. (2010). Earthworms, soil fertility and aggregate-associated soil organic matter dynamics in the Quesungual agroforestry system. *Geoderma*, 155(3), 320–328.
- Fonte, S. J., Winsome, T., Six, J. (2009). Earthworm populations in relation to soil organic matter dynamics and management in California tomato cropping systems. *Applied soil ecology*, 41(2), 206–214.
- Fonte, S. J., Yeboah, E., Ofori, P., Quansah, G. W., Vanlauwe, B., Six, J. (2009). Fertilizer and residue quality effects on organic matter stabilization in soil aggregates. *Soil Science Society of America Journal*, 73(3), 961–966.
- Kong, A. Y., Fonte, S. J., van Kessel, C., Six, J. (2009). Transitioning from standard to minimum tillage: trade-offs between soil organic matter stabilization, nitrous oxide emissions, and N availability in irrigated cropping systems. *Soil and Tillage Research*, 104(2), 256–262.
- Fonte, S. J., Kong, A. Y., van Kessel, C., Hendrix, P. F., Six, J. (2007). Influence of earthworm activity on aggregate-associated carbon and nitrogen dynamics differs with agroecosystem management. *Soil Biology and Biochemistry*, 39(5), 1014–1022.
- Kong, A. Y., Fonte, S. J., van Kessel, C., Six, J. (2007). Soil aggregates control N cycling efficiency in long-term conventional and alternative cropping systems. *Nutrient Cycling in Agroecosystems*, 79(1), 45–58.
- Fonte, S. J., Schowalter, T. (2005). The influence of a neotropical herbivore (*Lamponius portoricensis*) on nutrient cycling and soil processes. *Oecologia*, 146(3), 423–431.
- Fonte, S. J., Schowalter, T. D. (2004). Decomposition of Greenfall vs. Senescent Foliage in a Tropical Forest Ecosystem in Puerto Rico. *Biotropica*, 36(4), 474–482.
- Rinker, H. B., Lowman, M. D., Hunter, M. D., Schowalter, T. D., Fonte, S. J. (2001). Literature review: canopy herbivory and soil ecology, the top-down impact of forest processes. *Selbyana*, 225–231.

### **Non-Refereed Chapters in Books**

- Kong, A. Y., Gentile, R., Chivenge, P., Fonte, S. J., Six, J. (2010). Trade-Offs Associated with Using Soil C Sequestration as Climate Change Mitigation. *Handbook of Climate Change and Agroecosystems: Impact, Adaptation, and Mitigation*. London: Imperial College Press.
- Fonte, S. J., Schowalter, T. D. (2004). Decomposition in forest canopies. *Forest Canopies*. San Diego: Elsevier.

### **Contribution to Scientific Report**

- Fonte, S. J. (in press). Polyculture and covercrops, section in Chapter IV: Soil Biodiversity: Threats and Interventions. *Global Soil Biodiversity Atlas*. Global Soil Biodiversity Initiative.

## Research Report

Fonte, S. J., Vanek, S. J., Oyarzun, P., Parsa, S., Rao, I., Quintero, D. Carolina, Lavelle, P. (2012). *Explorando Opciones Agroecológicas para el Manejo de la Fertilidad del Suelo en Sistemas de Agricultura en pequeña escala de las Zonas Alto-Andinas*. McKnigh Foundation.

## PAPERS PRESENTED/SYMPOSIA/INVITED LECTURES/PROFESSIONAL MEETINGS/WORKSHOPS

November 2015, "Fonte, S.J. J. Six, E. Barrios, L. Rousseau, and P. Lavelle. Soil macrofauna as drivers of soil-based ecosystem services in hillside agroecosystems of Central America. Invited Symposium - Entomology Society (with Tri-Societies (ASA, CSA, SSAJ) Annual Meeting), Minneapolis, MN", peer-reviewed/refereed.

November 2015, "LaHue, G.T., M.A. Adviento-Borbe, B.A. Linquist, C. van Kessel, and S.J. Fonte. Memory effect of past N fertilization increases N<sub>2</sub>O emissions from unfertilized controls. Tri-Societies (ASA, CSA, SSAJ) Annual Meeting, Minneapolis, MN", peer-reviewed/refereed.

November 2015, "Mitchell, J.P., S.J. Fonte, A. Shrestha, K. Daane, and K. Asai. Macrofauna abundance and composition in no-till and cover cropped surface soils in the San Joaquin Valley, CA. Tri-Societies (ASA, CSA, SSAJ) Annual Meeting, Minneapolis, MN.", peer-reviewed/refereed.

November 2015, "Wang, D., S.J. Fonte, S.J. Parikh, J. Six, and K. Scow. Biochar additions enhance soil structure and the physical stabilization of C in aggregates. Tri-Societies (ASA, CSA, SSAJ) Annual Meeting, Minneapolis, MN", peer-reviewed/refereed.

October 2015, "Fonte, S.J. Participatory research for improving fallows in the Peruvian Andes – Invited seminar, Dept. of Plant Sciences, University Wyoming, Laramie, WY".

September 2015, "Valbuena D., P. Siles, A. Castro, S. Fonte, M. Mena, O. Téllez, L. Rousseau, R. Mendoza, and R. van der Hoek. Agroforestry systems for improved food production and the restoration of other ecosystem services in the dry corridor in Nicaragua. Tropentag Annual Meeting, Berlin, Germany", peer-reviewed/refereed.

August 2015, "Blankinship, J.C., S.J. Fonte, J. Six, and J.P. Schimel. Do plants and microbes engineer dry soil? Ecological Society of America Annual Meeting, Baltimore, Maryland", peer-reviewed/refereed.

August 2015, "Caulfield, M., S. Sherwood, P. Tiftonell, J. Groot, S.J. Fonte, and S. Vanek. Exploring the inter-relationship between landscape heterogeneity and within farm variability in resource allocation in the Andes. Wageningen Soil Conference, Wageningen, Netherlands", peer-reviewed/refereed.

August 2015, "Caulfield, M., S.J. Fonte, S. Vanek, S. Sherwood, J. Groot, and P. Tiftonell. Describing and exploring dominant land uses and their associated soil-based agroecosystem functions in a heterogeneous agricultural landscape in the Ecuadorian Andes. Wageningen Soil Conference, Wageningen, Netherlands", peer-reviewed/refereed.

December 2014, "Fonte S.J., N. Pauli, L. Rousseau, J. Six, and E. Barrios. The Role of Soil Biological Function in Regulating Agroecosystem Services and Sustainability in the Quesungual Agroforestry System. American Geophysical Union, San Francisco, CA", peer-reviewed/refereed.

December 2014, "Lavelle, P. et al. Soil macroinvertebrate communities as indicators of soil ecosystem services. A meta-analysis of the MACROFAUNA database. Global Soil Biodiversity Conference, Dijon, France", peer-reviewed/refereed.

- December 2014, "Scow K., A. Bossange, S.J. Fonte, K. Lyons, N. Mugwanya, S. Mwebe, S. Park, L. Pincus, and A. Salomon. Global Perspectives on social/cultural values of soil biodiversity of smallholder farmers. Global Soil Biodiversity Conference, Dijon, France", peer-reviewed/refereed.
- November 2014, "Quintero, D.C., S.J. Fonte, N. Asakawa, L. Moreno, J.E. Baquero, O. Gallo, N. Marín and A. Castro. Dinámica de la macrofauna asociada al manejo de un oxisol de la altillanura plana Colombiana Latin American Congress of Soil Science Meeting, Cusco, Peru", peer-reviewed/refereed.
- October 2014, "Fonte, S.J. Ecología de Suelos y Agricultura Sostenible. University of El Salvador, San Salvador".
- August 2014, "Fonte, S.J., C. Botero, D.C. Quintero, E. Velásquez, and P. Lavelle. Managing soil biological function vs. chemical fertility inputs to enhance productivity in the Colombian Llanos. Ecological Society of America Annual Meeting, Sacramento, California", peer-reviewed/refereed.
- June 2014, "Lavelle P., M.P. Hurtado, C. Botero, P. Chaparro, P., S. Loaiza, E. Rodriguez, C. Sanabria, and S.J. Fonte, S.J. Earthworms do not stimulate emissions of nitrous oxide in natural and managed ecosystems of Colombian Orinoquia. International Symposium on Earthworm Ecology, Athens, Georgia", peer-reviewed/refereed.
- April 2014, "Fonte, S.J. Biología de Suelos: Un Recurso Esencial para la Agricultura Sostenible. University del Centro, Jauja, Peru."
- March 2014, "Kearney S.P., E. Garcia, R. Barillas, S.J. Fonte, A. Castro and S.M. Smukler. Monitoring Soil-Based Ecosystem Services: A Landscape-Scale Approach for Heterogeneous Landscapes. Soil Science Society of America Ecosystem Services Conference, Sacramento, California", peer-reviewed/refereed.
- March 2014, "Sanabria, C., P. Lavelle and S.J. Fonte. Ants as Indicators of Land Use and Soil-Based Ecosystem Services in Agroecosystems of the Colombian Llanos. Soil Science Society of America Ecosystem Services Conference, Sacramento, CA", peer-reviewed/refereed.
- February 2014, "Lavelle, P., E. Velásquez and S. Fonte. Ecología del suelo e indicadores biológicos de la calidad del suelo – International Conference - Una Mirada Desde El Suelo: Integrando Nuevos Enfoques En La Investigación De Suelos Para El Desarrollo Rural, Lima, Peru".
- July 2013, "Fonte, S.J. and S.J. Vanek. Diversification of Andean Agroecosystems at Plot and Landscape Scales. McKnight Foundation - Andean Community of Practice Annual Meeting, Puenbo, Ecuador".
- February 2013, "Nesper M., E.K. Bünemann, S.J. Fonte, I.M. Rao, J.E. Velasquez, E. Frossard and A. Oberson. Distribution and hydrolyzability of organic phosphorus in aggregates of highly weathered tropical soils. Organic Phosphorus Conference. Smithsonian Tropical Research Institute, Panama City, Panama", peer-reviewed/refereed.
- September 2012, "Fonte, S.J., L. Rousseau, O. Téllez, R. van der Hoek, A. Castro, and P. Lavelle. Indicators of soil quality and impacts of land use management in agricultural landscapes of western Nicaragua, Tropentag Annual Meeting, Göttingen, Germany", peer-reviewed/refereed.
- September 2012, "Lavelle, P., S. Doledec, et al., and S.J. Fonte. The Need for Eco-Efficient Landscapes to Prevent Irreversible Degradation of Agroecosystems in Deforested Amazonia, Tropentag Annual Meeting, Göttingen, Germany", peer-reviewed/refereed.
- August 2012, "Lavelle, P., N. Rodríguez, E. Rodríguez, M.P. Hurtado, S. Loaiza, C. Botero and S.J. Fonte\*. Ecological indicators of agroecosystem function in the rapidly developing eastern plains of Colombia, Ecological Society of America Annual Meeting, Portland, Oregon", peer-reviewed/refereed.

August 2012, "Rousseau, L., S.J. Fonte, O. Téllez, R. van der Hoek and P. Lavelle. Biological indicators of soil quality and impacts of land use management in agricultural landscapes of northern Nicaragua, Ecological Society of America Annual Meeting, Portland, Oregon", peer-reviewed/refereed.

July 2012, "Fonte, S.J., D.C. Quintero, E. Velásquez, and P. Lavelle. Los efectos interactivos de plantas y lombrices en la estabilización física de la materia orgánica del suelo en agregados, Colombian Congress of Soil Science Meeting, Riohaucha, Colombia", peer-reviewed/refereed.

July 2012, "Rodríguez, E., S.J. Fonte, M.P. Hurtado, S. Loaiza, C. Botero, and P. Lavelle. Macrofauna como indicadores del manejo en la Orinoquia Colombiana, Colombian Congress of Soil Science Meeting, Riohaucha, Colombia", peer-reviewed/refereed.

July 2012, "van der Hoek, R., B. Mendoza, M. Mena, G. Bonilla, J. Pavón, O. Téllez, L. Rousseau, S.J. Fonte, P. Lavelle, A. Castro and I. Rao. Advances in integration of agroforestry based crop-livestock systems in the hillsides of Nicaragua. International Symposium on Integrated Crop-livestock Systems, Porto Alegre, Brazil", peer-reviewed/refereed.

### **OTHER ACTIVITIES/ACCOMPLISHMENTS – PUBLICATIONS/SCHOLARLY RECORD**

(August 11, 2015). Workshop, "Faculty Fall Ramp-Up - Best Practices for Student Engagement," Colorado State - Academic Computing & Networking Services, United States.

(August 11, 2015). Workshop, "Faculty Fall Ramp-Up - Canvas Overview," Colorado State - Academic Computing & Networking Services, United States.

### **TEACHING:**

<u>Year</u>	<u>Semester</u>	<u>Course No./Title</u>	<u>Cr. Hrs.</u>	<u>Enrollment</u>
2015	Fall	SOCR421 - Crop and Soil Management Systems II	4	31
2015	Fall	SOCR699 - Thesis	18	11

### **Guest Lectures:**

<u>Year</u>	<u>Semester</u>	<u>Course No./Title</u>	<u># of Guest Lectures</u>	<u>Delivery Mode</u>
2016	Spring	SOCR475 - Global Challenges in Plant and Soil Science	1	Face to Face
2015	Fall	SOCR492 - Departmental Seminar		Face to Face
2014	Fall	SSC-211 - Advanced Soil Microbiology - UC Davis	1	

### **EXTENSION/ENGAGEMENT ACTIVITIES/ACCOMPLISHMENTS**

#### **Field Day**

Soil quality and macrofauna evaluation. Youth, Las Vueltas, Chalatenango. Total number of participants: 15. Percent Responsible: 75%. 3rd Quarter 2015.

Soil fertility and agroforestry management. Adult, Chalatenango. Total number of participants: 60. Percent Responsible: 33%. 2nd Quarter 2013.

#### **Presentation**

Field course - methods for measuring soil quality. Youth, Colcabamba, Huancavelica. Total number of participants: 50. Percent Responsible: 50%. 3rd Quarter 2015.

#### **Workshop**

New research options for improving fallows. Adult, Quilcas, Junin. Total number of participants: 45. Percent Responsible: 50%. 3rd Quarter 2015.

## **COMMITTEES**

Research Panel, (January 2016 - Present).

## **PROFESSIONAL AFFILIATIONS AND ACTIVITIES**

American Geophysical Union. (2014 - Present).

Soil Ecology Society. (2007 - Present).

Soil Science Society of America. (2004 - Present).

Ecological Society of America. (2002 - Present).

World Agroforestry Center website. (December 2013).

El Espectador. (February 19, 2013).

Thomson Reuters Foundation. (February 8, 2013).

Fox News. (February 6, 2013).

Thomson Reuters Foundation. (December 3, 2012).

Desde Mi Pueblo. (January 2002).

Reviewer, Journal Article, *Frontiers in Earth Science*. (2015 - Present).

Reviewer, Journal Article, *Applied Microbiology and Biotechnology*. (2014 - Present).

Reviewer, Journal Article, *Conservation Letters*. (2014 - Present).

Reviewer, Journal Article, *Ecology*. (2014 - Present).

Reviewer, Journal Article, *Ecosystems*. (2014 - Present).

Reviewer, Journal Article, *Forest Ecology and Management*. (2014 - Present).

Reviewer, Journal Article, *Nutrient Cycling in Agroecosystems*. (2014 - Present).

Reviewer, Journal Article, *Agroforestry Systems*. (2013 - Present).

Reviewer, Journal Article, *Agronomy for Sustainable Development*. (2013 - Present).

Reviewer, Journal Article, *Ecosphere*. (2013 - Present).

Reviewer, Grant Proposal, Natural Environment Research Council (NERC). (2013 - Present).

Reviewer, Journal Article, *Agriculture, Ecosystems and Environment*. (2012 - Present).

Reviewer, Journal Article, European Journal of Soil Science. (2012 - Present).

Reviewer, Journal Article, Science of the Total Environment. (2012 - Present).

Reviewer, Journal Article, Catena. (2011 - Present).

Reviewer, Journal Article, Plant and Soil. (2011 - Present).

Reviewer, Journal Article, Soil and Tillage Research. (2011 - Present).

Reviewer, Journal Article, Applied Soil Ecology. (2010 - Present).

Reviewer, Journal Article, Field Crops Reseach. (2010 - Present).

Reviewer, Journal Article, Journal of Environmental Quality. (2010 - Present).

Reviewer, Journal Article, Soil Biology and Biochemistry. (2010 - Present).

Reviewer, Journal Article, Biogeochemistry. (2009 - Present).

Reviewer, Journal Article, Range Ecology and Management. (2009 - Present).

Reviewer, Journal Article, Soil Science Society of America Journal. (2008 - Present).

Reviewer, Journal Article, Geoderma. (2007 - Present).

Reviewer, Journal Article, European Journal of Soil Biology. (2004 - Present).

Reviewer, Journal Article, Mountain Research and Development. (2012).

Reviewer, Journal Article, Soil Use and Management. (2010 - 2012).

Reviewer, Journal Article, Environmental Management. (2009 - 2012).

Reviewer, Journal Article, Pedosphere. (2010).

**OTHER ACTIVITIES/ACCOMPLISHMENTS – SERVICE/OUTREACH**

Non-Governmental Organization (NGO), Grupo Yanapai, Huancayo, N/A, Peru. (October 2014 - Present).

Non-Governmental Organization (NGO), International Center for Tropical Agriculture, Cali, Valle de Cauca, Colombia. (September 2013 - Present).

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