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JOHAN SIX
AGROECOLOGIST

WORK Environmental Systems Science

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EDUCATION

1998 Ph.D., Soil Science, Colorado State University, Fort Collins, Colorado. Dissertation: 'Aggregate and Soil Organic Matter Fraction Dynamics in Agroecosystems'

1995 M.Sc. Bio-Engineering, Katholieke Universiteit Leuven, Belgium. Major: Soil Science; Minor: Tropical Agriculture. Thesis: 'Soils and Land Use in the Eastern Region of South Vietnam and Lam Dong Province'

RESEARCH EXPERIENCE

2013- present *Full Professor of Sustainable Agroecosystems*
Department of Environmental System Science, ETH-Zurich, Zurich, Switzerland.

2009-2012 *Full Professor in Agroecology*
Department of Plant Sciences, University of California, Davis, CA.

2008-2009 *Associate Professor in Agroecology*
Department of Plant Sciences, University of California, Davis, CA.

2006-2008 *Assistant Professor in Agroecology*
Department of Plant Sciences, University of California, Davis, CA.

2002-2006 *Assistant, Associate and Full Professional Researcher*
Department of Agronomy and Range Science, University of California, Davis, CA.

2001-2012 *Adjunct Research Scientist*
Natural Resource Ecology Laboratory, Colorado State University, Ft. Collins, CO.

2000 *Visiting Scientist*
Argonne National Laboratory, Argonne, IL.

1999-2012 *Affiliated Professor*
Department of Soil and Crop Sciences, Colorado State University.
Regular Faculty Member
Graduate Degree Program in Ecology, Colorado State University, Ft. Collins, CO.

1999-2001 *Scientist*
Natural Resource Ecology Laboratory, Colorado State University, Ft. Collins, CO.

1999 *Research Associate*
Natural Resource Ecology Laboratory, Colorado State University, Ft. Collins, CO.

1996-1998 *Graduate Research Assistant*, Natural Resource Ecology Laboratory, Colorado State University, Ft. Collins, CO.

1995 *Lab Technician*, Natural Resource Ecology Laboratory, Colorado State University, Ft. Collins, CO.
1994 *Graduate Research Assistant*, Institute of Agricultural Science, Ho Chi Minh City, Vietnam.

TEACHING AND MENTORING

Graduate Student Advising (1997-present):

ETH Zurich: advisor for +20 Ph.D. and +40 M.Sc. students
University of California, Davis: advisor for 5 Ph.D. and 9 M.Sc. students; co-advisor for 3 Ph.D. and 3 M.Sc. students.
Catholic University of Leuven (Belgium): co-advisor for 8 M.Sc. and 3 Ph.D. students.
Wageningen University (Netherlands): co-supervising research of 4 Ph.D. and 7 M.Sc. students.
Colorado State University, Fort Collins: co-advising 3 Ph.D. students.
Southern University of Illinois, Carbondale: co-supervising 1 Ph.D. and 1 M.Sc. student.
Ohio State University, Columbus: co-supervisor for 1 M.Sc. student.
University of New Hampshire, Durnham: co-supervisor for 1 M.Sc. student.
University of Georgia, Athens: co-supervising research of 1 Ph.D. student.
Second University of Naples (Italy): co-supervising research of 1 Ph.D. student.
Universite Catholique de Louvain (Belgium): co-supervising research of 2 Ph.D. students
China Agricultural University (China): co-supervising research of 1 Ph.D. student
University of Helsinki (Finland): co-supervising research of 1 Ph.D. student
University of Edinburgh (UK): co-supervising research of 1 Ph.D. student
University of Waikato (New Zealand): co-supervising research of 1 Ph.D. student.

Teaching (2006 - to date):

ETH Zurich (2013 – to date):

Lecture
- Agroecosystems I & II
- Agroecologists without Borders
- Biogeochemical Modeling
- Tropical Cropping Systems, Soils, and Livelihoods

Seminars
- Global Change Biology
- Sustainable Plant Systems

Field Trips and Summer Schools
- Interdisciplinary Excursions
- Interdisciplinary Project
- World Food System Center Summer School "Organic Production Systems"
- Zurich-Basel Plant Science Center Summer School "Green Revolution Reloaded"

UC Davis (2006-2012)
- Cropping Systems of the World: Unifying Principles
- Sustainability and Agroecosystem Management
- Stable Isotopes in Ecology
- River Basin Biogeochemistry
- Agronomist without borders

FUNDED RESEARCH PROPOSALS (2000-PRESENT)
Principal Investigator

Understanding the mechanisms of sustainable intensification of tropical maize cropping systems on degraded soils through regenerative practices. **J. Six**, B. Vanlauwe, M. Corbeels. *Swiss National Foundation. Interdisciplinary project.* Funded for 999,964 CHF. (07/24 – 06/28)

City Regions Food Systems, RUNRES Phase 2. **J. Six**, A. Odindo, M. Konlambigue, B. Merdekios and K. Kintche. *Swiss Development Cooperation*. Funded for 4,500,000 CHF. (01/2023 – 09/27)

Dynamic cocoa agroforestry in action in Ghana. *Swiss National Foundation, SOR4D - Solution-oriented Research for Development programme.* **J. Six**, B. Andres, I. Egyir, Y. Glover, P. Heid, E. L. K. Dawoe. Funded for 793,562 CHF (03/2023 – 02/2026)

Service Contract within the Framework of the Project for Sustainable use of Natural Resources - Reflexion Innovation Soutien Climat (RISC) Project. *Departement de l'economie, de l'innovation et du sport du Canton de Vaud Direction generale de l'agriculture, de la viticulture et des affaires veterinaires (DGAV), Mandaterre*. **J. Six**, D. Barjolle. Funded for 229,500 CHF (01/2022 – 07/2030)

Tropical Soil Erosion Dynamics (TropSEDs): Unraveling the roles of climate and land-use on the erosional transfer of carbon from source to sink through time in the Kasai Basin. *Swiss National Foundation, Sinergia.* **J. Six**, J. Hemingway, K. Van Oost. Funded for 2,790,499 CHF (03/2022 – 02/2026)

For resilient and sustainable farms and value chains from the perspective of the Agricultural Region Strategies policy tool. **J. Six** and D. Barjolle. RESPONSE program. Funded for 73,143 CHF (03/2021 – 02/2025)

Edible research goes storytelling: Participative design of an interactive exhibition on food value chains. **J. Six**, and A. Hoffman. *Swiss National Foundation, Agora*. Funded for 196,747 CHF. (02/21 – 07/22)

Dynamic agroforestry systems for sustainable intensification of cocoa production in West Africa (DAFS). **J. Six**, C. Andres, E. Dawoe. *Coop Research Program*. Funded for 270,000 CHF. (07/2019 – 06/2021)

The rural-urban nexus: Establishing a nutrient loop to improve city region food system resilience (RUNRES). **J. Six**, A. Odindo, C. Okafor, M. Schut, and S. Shibru. *Swiss Development Cooperation*. Funded for 4,680,000 CHF. (05/2019 – 04/23)

Recherche et analyse de systèmes agricoles y compris agroforestiers ainsi que la résilience des exploitations agricoles. **J. Six**, D. Barjolle. *Canton de Vaud*. Funded for 320,000 CHF. (01/19-12/22)

Enabling sustainable cassava starch yield increase through appropriate smallholder mechanization, scheduled planting/harvesting and the use of decision support tools. **J. Six**. *Engineering for Development – Sawiris Foundation*. Funded for 228,258 CHF. (02/2018 – 01/2022)

Assessing the role of organic value chains in enhancing food system resilience (OrRes). **J. Six**, R. Chavez, B. Kopainsky. *Mercator Foundation - World Food Systems Center.* Funded 284,709 CHF. (08/17-07/21)

Integrated soil fertility management for climate smart intensification of maize-based cropping systems in Kenya. **J. Six**. *Swiss National Foundation*. Funded for 332,683 CHF. (06/17-05/21).

Testing SHARP for Swiss farming systems, **J. Six**. *Canton de Vaud*. Funded for 60,000 CHF. (01/17-12/18)

Edible Research: Hands-on learning for sustainability in agroecosystems. **J. Six**, A. Hofmann, M. Grant. *Swiss National Foundation, Agora*. Funded for 182,015 CHF. (08/16-07/18)

An integrated soil-spectroscopy-modeling platform to assess Swiss agricultural soil functions. J. Six, A. Keller, J. Lee. *ETH Grant*. Funded for 207,000 CHF. (08/16 -07/19)

Resilience in the Swiss Food System. **J. Six**. B. Lehmann. *Bundesamt für Landwirtschaft BLW*, Funded for 200,000 CHF. (04/16-08/20)

Nitrified Urine Fertilizer- Solutions oriented community development. **J. Six**, E. Lieberherr, A. Oberson-Dräyer. *Mercator Foundation - World Food Systems Center*. Funded for 249,726 CHF (04/16-03/19)

Innovations for Building Resilience in Food Systems, **J. Six**. *Bundesamt für Landwirtschaft BLW*. Funded for 150,000 CHF. (03/16-08/17)

Trees for the enhancement of mycorrhizal functioning in low-input cropping systems. **J. Six**, W. Blaser, H. Gamper. *Swiss National Foundation*. Funded for 252,042 CHF. (10/15 - 09/18)

Building Resilience in Food Systems" World Food System Center (WFSC) Flagship Project. **J. Six**. D. Tendall, M. Grant. *ETH Foundation/WFSC – Donation from Nestlé*. Funded for 150,000 CHF. (10/15-05/18)

Towards nutritional security through organic management of soil fertility in orange-fleshed sweet potato systems in Mozambique. **J. Six**, M.I. Andrade, E.I.P. Pereira. *Mercator Foundation - World Food Systems Center*. Funded for 234,850 CHF. (09/15 - 08/19)

An integrated experiment-model approach to elucidate plant-soil interactions and N transformation in aggregated soils. **J. Six** and F. Conen. *Swiss National Foundation*. Funded for 180,000 CHF. (07/15 – 06/18)

Cocoa and aquaculture value chain analysis. **J. Six**. *Bühler AG*. Funded for 27,000 CHF. (04/15-03/16)

A comprehensive examination of nitrogen cycling and microbial communities within soil microenvironments in integrated organic farming systems in Switzerland. **J. Six**, M. van der Heijden. *Mercator Foundation - World Food Systems Center*. Funded for 245,000 CHF. (08/14 - 07/17)

Assessing the regional biophysical and economic potential of organic cropping practices as a sustainable alternative. **J. Six**. *Swiss National Foundation*. Funded for 114,000 CHF. (06/14 - 05/16)

Nitrous Oxide Emissions Associated with N Fertilizer Use in Corn-Corn and Corn-Soybean Cropping Systems. **J. Six**. *International Plant Nutrition Institute*. Funded for $60,000. (01/12 – 12/12)

Development of Agriculture Sector Project Protocols. **J. Six**. *Climate Action Reserve –Terra Global Capital*. Funded for $37,027. (04/11-03/12)

Research on the Effect of Conservation Agriculture on Aggregates and Soil Quality in Chiapas. **J. Six**, B. Govaerts, S. Fonte. *USAID-CIMMYT*. Funded for $36,000. (04/11-12/11)

Integrating physically defined SOM pools into model structures. **J. Six**, P.I. *Oak Ridge National Laboratory, Department of Energy*. Funded for $179,296. (09/10 – 08/12)

The potential of biochar soil amendments as a carbon sequestration method in California agriculture. **J. Six**, E. Suddick, P. Hernes, V. Claassen. *California Energy Commission*. Funded for $700,000. (05/10-06/13)

Nitrous Oxide Emissions from the Application of Fertilizers: Source Partitioning. **J. Six**. P.I. *International Plant Nutrition Institute*. Funded for $25,000. (01/10 – 12/10)

Can photo-degradation elucidate spatial and temporal variation in CO_2 fluxes in California ecosystems? **J. Six**, P.I., E. Suddick. *Kearney Foundation*. Funded for $89,999. (01/10 – 06/12)

Assessing practices and influencing policy to mitigate nitrous oxide (N_2O) emissions from California Agriculture. **J. Six**, P.I., M. Burger, W.R. Horwath, M. Fischer, and B. Salas. *Packard Foundation*. Funded for $350,000. (04/09 – 03/ 12)

N_2O Emissions from the Application of Fertilizers in Agricultural Soils. **J. Six**, P.I., W.R. Horwath, M Burger, M Fischer, B. Salas, K.M. Scow, L. E. Jackson. *California Energy Commission*. Funded for $499,960. (04/09 – 03/12)

Spatial and Temporal Dynamics of Deep Soil Gaseous and Soluble Element Fluxes from New vs. Old Organic Matter. **J. Six**, P.I., and A. Berhe. *Kearney Foundation*. Funded for $89,950. (01/09 – 06/11)

Land use and land use change in the GREET model. **J. Six**. *California Energy Commission.* Funded for $50,780. (09/08-08/10)

Cropping systems management and greenhouse gas emissions how can we beat the heat? **J. Six** and L. Dendooven, PI., *UC MEXUS CONACYT*. Funded for $24,966. (08/08 - 12/09)

Advancing soil conservation research through enhanced stakeholder-researcher interaction in rural Honduras. **J. Six.** and S. Fonte. *University Outreach & International Programs*, University of California. Funded for $6000. (01/08 – 01/09)

Effect of climate change on crop production in the Central Valley of California. **J. Six**, P.I. and S. De Gryze. *California Energy Commission*. Funded for $60,000. (10/07-10/08)

Physicochemical and biochemical controls on soil C saturation behavior. **J. Six**., P.I. and A.F. Plante. *Department of Energy*. Funded for $374,991. (09/07-08/10)

Sustainable, environmentally friendly, and cost-effective production of biomass for energy efficient biofuels in California. **J. Six**, P.I., and S. De Gryze, S. Kaffka, B. Linquist, J. Mitchell, M. Ruark, C. van Kessel, M. Delucchi, M. Melaina, R. Howitt. *Chevron*. Funded for $890,907. (09/07-08/10)

Incorporating physically defined SOM pools into EPIC. **J. Six**, P.I. *Oak Ridge National Laboratory, Department of Energy*. Funded for $165,333. (09/07 – 08/10)

Control of vertical soil variation on temporal variation of soil CO_2 production and emissions. J. Six, and S. De Gryze. *Kearney Foundation*. Funded for $86,000. (01/07-12/08)

Technology transfer and engagement for integrated soil fertility management in Ghana. *University Outreach & International Programs*, University of California. Funded for $7000. (01/07 – 01/08)

Collaborative research on feedbacks between microbial community composition, soil structure, plant growth and nitrogen cycling in ecosystems exposed to elevated CO_2 and O_3. **J. Six**, P.I., H. Chung, K.M. Scow, and C. van Kessel. *National Science Foundation*. Funded for $672,000. (07/06- 06/09)

Residue and nitrogen management effects on carbon cycling in irrigated conservation tillage systems. **J. Six,** PI., and M. Pulleman. *Kearney Foundation*. Funded for $39,950. (01/06-12/06)

Conservation agriculture in the central highlands of Mexico: its effects on soil processes. **J. Six** and L. Dendooven, PI., *UC MEXUS CONACYT*. Funded for $24,963. (07/05 - 12/06)

Linking cover crop C sequestration to microbial community function within soil microenvironments. **J. Six,** PI., and K. Hristova. *Kearney Foundation*. Funded for $80,000. (01/05 - 12/06)

An integrated assessment of the biophysical and economic potential for greenhouse gas mitigation in California agricultural soils. **J. Six**, PI., R.E. Howitt, D.E. Rolston, R. Plant, J. Mitchell, C. van Kessel, and J.W. Hopmans. *California Energy Commission/ Kearney Foundation*. Funded for $332,945. (11/04 - 10/06)

Soil C saturation and steady state level determine C sequestration rate and capacity. **J. Six**, PI., and K. Paustian. *Department of Energy.* Funded for $374,995. (10/04 - 09/07)

The interaction between resource quality and aggregate turnover controls ecosystem nitrogen and carbon cycling. **J. Six**, PI., and C. van Kessel. *National Science Foundation*. Funded for $620,000. (05/04 - 04/07)

Influence of earthworm activity on C stabilization in organic versus conventional irrigated tomato systems. **J. Six**, PI., and C. van Kessel. *Kearney Foundation*. Funded for $79,960. (07/03 - 06/05)

Aggregate Dynamics Control Carbon Sequestration and Resource Use Efficiency. **J. Six**, PI., and C. van Kessel. *Kearney Foundation*. Funded for $69,997. (01/03 - 12/04)

Biomass Nitrogen Conversions during Combustion. **J. Six**, PI. *National Renewable Energy Laboratory*. Funded for $54,673. (07/02 - 06/04)

Soil C Saturation: Determining rates and limits of carbon sequestration. **J. Six**, PI., R. Conant, and K. Paustian. *Department of Energy.* Funded for $610,870. (10/00-9/04)

Technical Support to Develop and Test New Protocol for the Physical Fractionation of Soils. **J. Six**, PI. *Argonne National Laboratory, Department of Energy*. Funded for $35,018. (03/00 - 09/01)

<u>Co-Principal Investigator</u>

Reactive nitrogen at the Climate, Energy, Agriculture, water, and health Nexus (ReCLEAN). A. Nenes, M. Ammann, L. Winkel, C. Grossiord, **J. Six** et al. Joint Initiative in the Strategic Area "*Energy, Climate and Sustainable Environment*" Contributing Institutions: EPFL, ETH, PSI, WSL, EAWAG. Funded for 3,526,281 CHF

Driving agroecological transitions in the humid tropics of Central and Eastern Africa through traNsdisciplinary Agroecology Living LabS (CANALLS). *European Commission H2020-SFS-2020-2.* Funded for 1,017,783. (01/2023- 12/2026)

Selection of root microbiomes to improve tolerance of maize to nitrogen and phosphorus limitation. M. Hartmann, M. Mescher, J. Lynch, **J. Six**. *Swiss National Foundation.* Funded for 562,848 CHF. (01/2022 - 05/2026)

SOILGUARD – Sustainable soil management to unleash soil biodiversity potential and increase environmental, economic and social wellbeing. M. Hartmann, **J. Six**, K. Benabderrazik. *European Commission H2020-SFS-2020-2*. Funded for 6,999,161 EUR (ETH Zurich portion 378,430 EUR). (03/2021- 02/2025)

SUSTAIN-COCOA: Sustainable sourcing policies for biodiversity protection, climate mitigation, and improved livelihoods in the cocoa sector. R. Garrett, **J. Six**, and J.D. Wegner. *Swiss National Foundation Biodiversa.* Funded for 549,746 CHF. (04/2021 - 03/2024)

Root microbiome selection and mechanisms to improve tolerance of maize to nitrogen stress and drought. M. Hartmann, **J. Six**, and M. Mescher. *ETH grants*. Funded for 266,800 CHF. (03/2021 – 02/2024)

Agropolitan territories in monsoon Asia. S. Cairns, **J. Six** et al. *Future Cities Laboratory Global; Singapore National Research Foundation*. Funded for 2,289,858 CHF. (11/2020 – 10/2025)

New urban agendas under planetary urbanization: Designing sustainable agri-urbanisms. M. Topalovic, C. Schmid, **J. Six** et al. *Future Cities Laboratory Global; Singapore National Research Foundation*. Funded for 1,901,878 CHF. (11/2020 – 10/2025)

Enhancing biodiversity and resilience in crop production. J. Ghazoul, W. Zhang, **J. Six**, R. Finger, M. Sonnevelt, A. Komarek, L. You and X. Zhang. *Bayer Ag*. Funded for 661,908 Euro. (01/2021 – 12/2021)

Nutrition in secondary cities: creating "nutrition vital cities" – taking grassroot innovations to impact across countries and continents. H. Prytherch (PI), D. Barjolle, **J. Six** et al. *Swiss Development Cooperation*. Funded for 7,300,000 CHF. (05/2021- 04/2025)

The numerical subsoil: understanding how land management affects the subsoil microbiome to improve numerical simulations of coupled carbon-nitrogen cycles in soils. Van de Broek M., Hartmann, M., and **J. Six**. *Swiss National Foundation Ambizione*. Funded for 860,359 CHF. (09/2020-08/2024)

LANDMARC. Spijker E., J. Lieu, **J. Six** et al. *Horizon 2020, EU*. Funded for 6,999,988.75 EUR (435,125 EUR ETH Zurich portion). (07/2020–06/2024)

Root Phenotype Microbiome. Galindo Castañeda T., M. Hartmann, **J. Six**. *Horizon 2020, EU Marie Skłodowska-Curie COFUND*. Funded for 203,149.44 EUR. (02/2020–01/2022)

When trees die: Understanding how plants and microbes interact and influence soil biogeochemical processes. E. Solly, M. Hartmann, **J. Six**. *Swiss National Foundation Ambizione*. Funded for 911,660 CHF. (09/2019-08/2023)

Reconstruct-ETHZ. M. Bucher, **J. Six.** University of Cologne. Funded for 18,151.26 EUR. (08/2019-08/2019)

Biochar as a soil amendment for sustainable yam systems in West Africa (Biochar4Yam). E. Frossard, D. I. Kiba, V. K. Hgaza, **J. Six**, D. Daouda. *Engineering for Development (E4D) Scholarship Programmes, ETH Zurich.* Funded for 175,000 CHF. (04/2019-03/2023)

Improved measurements of plant transpiration for sustainable agricultural water use. E. Paul-Limoges, A. Damm, N. Buchmann, and J. Six. *Plant Science Center Syngenta Research Fellowship*. Funded for 175,000 CHF. (04/2019 – 10/2020)

Village post-harvest processing and farmer support centres. D. Stähli, **J. Six**. *SECO*. Funded for 100,000 CHF. (02/2019-06/2022)

The future of rainfed agriculture and sustainable food production in Ethiopia. P. Molnar, **J. Six**, M. T. Wakjira. *Engineering for Development (E4D) Scholarship Programmes, ETH Zurich*. Funded for 173,410 CHF. (2019-2022)

Soil microbiome engineering to reverse land degradation and enhance crop production in sub-Saharan Africa. E. R. J. Wubs, **J. Six.** *Rubicon Grant, Netherlands Organisation for Scientific Research*. Funded for 158,232 EUR. (12/2018-05/2021)

Dynamic agroforestry systems (DAFS) to reduce greenhouse gasses and restore environmental health in West African cocoa landscapes. C. Andres, **J. Six**. *Swiss Tropical and Public Health Institute*. Funded for 60,000 CHF. (09/2018-11/2019)

(Agro)ecosystem-based livelihoods in an environment of climate change and socio-economic transformation in northern Vanuatu. M. Stauffacher, **J. Six**. *ETH Grant*. Funded for 201,000 CHF. (08/2018-08/2021)

SUDAC – Swissuniversities development and cooperation network. Science Action in Schools for Sustainable Development (SAS4SD). P. Molnar, B. Kürsteiner, J. Seibert, C. Studer, **J. Six.** *Consortia for Education and Research (COFER)*. Funded for 480,000 CHF. (10/2017-09/2020)

Crop diversification and low-input farming across Europe: from practitioner's engagement and ecosystems (Diverfarming). R. Zornoza et al. *European Commission*. Funded for 10 Mio EUR (500,933 CHF Swiss portion). (05/17 – 04/22)

AERTCvc – Assessing and Enhancing the Resilience of the tef and cacao value chains. A. Patt, **J. Six**. P. Krütli, *COOP Research Program - World Food Systems Center*. Funded for 249,840 CHF. (04/16-03/18)

African Cassava Agronomy Initiative. B. Vanlauwe et al. *Bill and Melinda Gates Foundation*. Funded for 15 Mio (266,284 CHF Swiss portion). (01/16-12/19)

Innovation hubs for evaluation and adoption of soil improving cropping systems. R. Charles, M. Van der Heijden, Thomas Keller, J. Mayer**, J. Six**. *Swiss National Foundation*. Funded for 441,680 CHF. (01/16 – 12/17)

How to sustainably intensify organic Basmati rice production in Uttarakhand, India. C. Decock, **J. Six** and P. Tittonell. *COOP Research Program - World Food Systems Center*. Funded for 292,689 CHF. (05/15 – 04/17)

LAND Management: Assessment, Research, Knowledge base: LANDMARK, R. Creamer, **J. Six**, et al., *Horizon 2020, EU.* Funded for 5,212,611 EUR (242,000 EUR Swiss portion). (05/15 – 12/19)

Climate Change adaptability of cropping and farming systems for Europe, E. Justes, P. Zander, R. Bob, E.S. Jensen, W. Rossing, H. Hauggaard-Nielsen, **J. Six**, H. Gomex-MacPherson, F. Stoddard, R. Charles, M. Hanegraaf. *Joint Research Programming Initiative on Agriculture, Food Security and Climate Change FACCE-ERA-NET+*. Funded for 2,900,000 CHF (237,600 CHF Swiss Portion). (01/15 – 12/17)

Biophysical, institutional and economic drivers of sustainable soil use in yam systems for improved food security in West Africa, E. Frossard, B. Aighewi, S. Ake, D. Barjolle, H. Nacro, D. Dao, L. Diby, F. Lompo, **J. Six**. *Swiss National Foundation – Swiss Development Cooperation*. Funded for 2,999,900 CHF. (10/14 - 09/17)

Greenhouse gas emissions from paddy rice soils under alternative irrigation management, S. Sleutel, L. Celi, **J. Six**, Ch. Li, *Joint Research Programming Initiative on Agriculture, Food Security and Climate Change FACCE-JPI.* Funded for 735,000 CHF (172,500 CHF Swiss portion). (03/14 - 02/18)

COMET-Global: Whole-farm GHG estimation and environmental diagnostics platform, K. Paustian, **J. Six**, E. Lugato, J.A. Fuentes, M. Bernoux, P. Smith, P. Grace. *Joint Research Programming Initiative on Agriculture, Food Security and Climate Change FACCE-JPI.* Funded for 650,000 CHF (213,600 CHF Swiss portion). (01/14 – 12/16)

Life Cycle Assessment of Air Emissions and Greenhouse Gas Offset Potentials in Perennial Fruit and Nut Crops. S. Brodt, A. Kendall, and **J. Six**. *California Department of Food & Agriculture*. Funded for $398,963. (11/12 - 10/15)

At the Root of Sustainable Bioenergy: Using Genetic Variation In Root Traits To Maximize Soil Carbon Sequestration And Biomass Yields. M.A. De Graaff, J.D. Jastrow, G. Morris, and **J. Six**. *United States Department of Agriculture*. Funded for $364,760. (11/12 – 10/15)

Defining and Implementing Agricultural Management Practices To Mitigate And Adapt To Climate Change. M. Burger, W.R. Horwath, **J. Six**, and D. Putnam. *United States Department of Agriculture*. Funded for $745,247. (10/12 – 09/15)

Evaluating Mitigation Options of Nitrous Oxide Emissions in California Cropping Systems. M. Burger, W.R. Horwath, and **J. Six**. *California Air Resource Board*. Funded for $400,000. (04/12 – 12/14)

Economic evaluation of changing the frequency and volume of flooding in the Yolo Bypass on the Yolo County Economy. R. Howitt, P.I., and **J. Six**. *Yolo County*. Funded for $62,000. (04/11 – 12/11)

Calibrating, Validating, and Implementing Process Models for California Agriculture Greenhouse Gas Emissions. C. Li, P.I., W. Salas, **J. Six**, and W.R. Horwath. *California Air Resource Board*. Funded for $249.688. (03/11 – 02/13)

Increasing the Capacity of Smallholder Farmers to Produce and Market Vegetable Crops in Uganda and Democratic Republic of Congo. K.M. Scow, P.I., **J. Six**, M. Van Horn, H.

Ballard. *Horticulture Collaborative Research Support Program, USAID*. Funded for $500,000. (10/10-09/13)

Safe Vegetable Production In Cambodia and Vietnam: Developing the HARE-Network to Enhance Farmer Income, Health, and the Local Environment. C. Trexler, P.I., G. Young, **J. Six,** D. Miller and M. Van Horn. *Horticulture Collaborative Research Support Program, USAID*. Funded for $500,000. (10/10-09/13)

U.S. agriculture's response to a carbon market: a PMP approach under full calibration. P. Merel, and **J. Six**. *United States Department of Agriculture*. Funded for $149,726. (10/10 – 09/12)

Promoting Fruit and Vegetable Production to Improve Nutrition in Nkokonjeru, Uganda. K.M. Scow, P.I., and **J. Six**. *Horticulture Collaborative Research Support Program, USAID*. Funded for $98,360. (02/10-01/11)

California Integrated Network to Enhance Sustainable Agroecosystems Science. K.M. Scow, P.I. T.P. Tomich, J. London, **J. Six**, and L.E. Jackson. *United States Department of Agriculture*. Funded for $200.000. (01/10 – 01/12)

N_2O Emissions from the Application of Fertilizers in Conservation Agriculture. B. Govaerts, PI., and **J. Six**. *USAID-CIMMYT*. Funded for $13,815. (01/10-12/10)

Collaborative Research to Understand How to Reduce N_2O Emissions from Nitrogen Land Application. W.R. Horwath, PI, M. Burger, T.K. Hartz, **J. Six**, C.F. Krauter. *California Air Resource Board*. Funded for $300,000. (01/09 – 12/11)

Evaluation of the medium-term impact of organic resource quality on system productivity and soil quality for contrasting agro-ecological zones in Kenya. B. Vanlauwe, PI., and **J. Six**. *USAID-CIAT*. Funded for $15,000. (01/09-12/10)

Integrated Assessment of Agronomic Management Practices on the Interactions of Soil and Rhizosphere Microbial Communities with *E. Coli* O157:H7. T. Suslow, K. Scow, and **J. Six**. *United States Department of Agriculture*. Funded for 395,138. (09/08-08/11)

Assessing the carbon budget of almond trees and developing a 3-D computer simulation model of almond tree architectural growth and dry matter partitioning. T. DeJong, PI., and **J. Six**. *Almond Board of California*. Funded for $68,474. (08/08-07/09)

Supporting long-term sustainable agriculture research at the Russell Ranch Sustainable Agricultural Facility. T. Tomich, S.R. Kaffka, **J. Six**, and W.R. Horwath. *Hatch and Multi-State Funds*. Funded for $75,000. (03/08-02/09)

Evaluation of the medium-term impact of organic resource quality on system productivity and soil quality along a semi-arid to humid transect in sub-Saharan Africa. B. Vanlauwe, PI., **J. Six**. *USAID-CIAT*. Funded for $15,000. (01/08-12/08)

Evaluation of C and N dynamics in long term trials in sub-Saharan Africa focusing on tillage, residue management, and rotational effects. B. Vanlauwe, PI., M. Pulleman, **J. Six**, L. Brussaard, and L. Stroosnijder. *International Atomic Energy Agency*. Funded for $16,000. (10/07-09/09)

Enhancing COMET-VR system: Uncertainty estimation and expanded management options. K. Paustian, PI., and **J. Six**. *United States Department of Agriculture/Natural Resource Conservation Service.* Funded for $251,000. (09/07-08/08)

Convolutions to scale plant effects on ecosystem functions from cm to counties. E. Laca, PI., K. Scow, **J. Six**, K.W. Tate. *Kearney Foundation*. Funded for $240,000. (01/07-12/08)

Integrating remote sensing and modeling to assess temporal and spatial variability of greenhouse gas emissions. S. De Gryze, J. Six, and R. Plant. *Kearney Foundation*. Funded for $86,000. (01/07 – 12/08)

Expanding the COMET-VR system: Including Forestry, Agroforestry, and Comprehensive Agricultural Systems. K. Paustian, PI., and **J. Six**. *United States Department of Agriculture/Natural Resource Conservation Service.* Funded for $245,000. (07/06-06/08)

Plant and Environmental Drivers of Ecosystem Recovery during C_4 Grassland Development. S.G. Baer, PI, J. Six. *Mellon Foundation*. Funded for $286,000. (06/06 - 05/09)

More crop per drop, more cropping per dropping: Optimizing the interactions between organic resources, soil macrofauna biodiversity and soil structure for enhanced water and nitrogen use efficiency in West and East African cropping systems. L. Brussaard, PI, D. Odee, B. Ouattara, L. Stroosnijder, B. Vanlauwe, **J. Six**, A. Mando, E. Ouedraogo. *Nederlands Organisatie voor Wetenschappelijk Onderzoek (NOW) – WOTRO Integrated Programmes*. Funded for $499,285. (01/06 -12/09)

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Development and Implementation of Cultural and Water Management Practices in Rice to Protect Downstream Water Quality. J. Hill, PI., A. Fischer, R.G. Mutters, C. van Kessel, **J. Six**, C.A. Greer, and L.D. Godfrey. *CALFED*. Funded for $1,196,000. (02/05-01/08)

Implementation of vegetative buffer, irrigation, and grazing best management practices to reduce pathogens, organic carbon, and colloids in runoff from rangelands and irrigated pastures. K.W. Tate, PI., E.R. Atwill, **J. Six,** and C. van Kessel. *CALFED*. Funded for $886,133. (02/05-01/08)

Predicting changes in landscape-level soil organic C following the implementation of minimum tillage. D.E. Rolston, PI., **J. Six**, J.W. Hopmans, K.T. Paw U, R. Plant, and C. van Kessel. *Kearney Foundation*. Funded for $240.000. (01/05-12/06)

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Sequestering C in stable soil organic matter fractions: How important is fertilizer-N in sequestering C? C. van Kessel, PI., and **J. Six**. *Kearney Foundation*. Funded for $110,941. (05/04-04/07)

Hydrologic and land use control on the nature and cycling of allochtonous organic carbon in mixed land use water sheds within Central Indiana. T. Filley, PI., C. Jafvert, **J. Six**, and J. Frey. *Indiana Water Resources Research Center.* Funded for $25,000. (03/04 – 02/05)

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Analysis of bacterial communities associated with aggregate size fractions of native vegetation, no-tillage and conventional tillage systems. D.L. Mummey, PI., W.E. Holben and **J. Six**. *United States Department of Agriculture*. Funded for $90,000. (05/03-04/05)

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-> 2010 Best Paper Award Soil Science Society of America journal.

Conant, R.T., **J. Six**, and K. Paustian. 2004. Land use effects on soil carbon fractions in Southeastern United States: II. Changes in soil carbon fractions along a forest to pasture chronosequence. Biol. Fert. Soils., 40:194-200.

Six, J., H. Bossuyt, S. De Gryze, and K. Denef. 2004. A history of research on the link between (micro)aggregates, soil biota, and soil organic matter dynamics. Soil Till. Res., 79:7-31.

Bruun, S., **J. Six**, L.S. Jensen. 2004. Estimating vital statistics and age distributions of measurable soil organic carbon fractions based on their pathway of formation and radiocarbon content. J. Theor. Biol., 230:241-250.

Simpson, R.T., S.D. Frey, **J. Six**, and R.K. Thiet. 2004. Preferential accumulation of microbial carbon in aggregate structures of no-tillage soils. Soil. Sci. Soc. Am. J., 68:1249-1255.

De Gryze, S., **J. Six**, K. Paustian, S.J. Morris, E.A. Paul, and R. Merckx. 2004. Soil organic pool changes following land use conversions. Global Change Biol., 10:1120-1132.

Bossuyt, H., **J. Six**, and P.F. Hendrix. 2004. Rapid incorporation of carbon from fresh residues into newly formed stable microaggregates within earthworm casts. Eur. J. Soil Sci., 55:393-399.

Six, J., S.M. Ogle, F.J. Breidt, R.T. Conant, A.R. Mosier, and K. Paustian. 2004. The potential to mitigate global warming with no-tillage is only realized when practiced in the long-term. Global Change Biol., 10:155-160.

2003

Van Groenigen, K.J., **J. Six**, D. Harris, H. Blum, and C. van Kessel. 2003. Soil ^{13}C-^{15}N dynamics in a N_2-fixing clover system under long-term exposure to elevated atmospheric CO_2. Global Change Biol., 9:1751-1762.

Conant, R.T., **J. Six**, and K. Paustian. 2003. Land use effects on soil carbon fractions in Southeastern United States: I. Management intensive grazing versus extensive grazing. Biol. Fert. Soils., 38: 386-392.

Paul, E.A., S.J. Morris, **J. Six**, K. Paustian and E.G. Gregorich. 2003. Determination of the ecosystem controls on C and N dynamics in afforested agricultural soils. Soil Sci. Soc. Am. J., 67:1620-1628.

Del Galdo, I., **J. Six**, A. Peressotti, and M.F. Cotrufo. 2003. Assessing the impact of land-use on C sequestration by means of soil organic matter fractionation and stable C isotopes. Global Change Biol., 9:1204-1213.

Frey, S.D., **J. Six** and E.T. Elliott. 2003. Reciprocal transfer of carbon and nitrogen by decomposer fungi at the soil-litter interface. Soil Biol. Biochem., 35:1001-1004.

Salas, A.M., E.T. Elliott, D.G. Westfall, C.V. Cole, and **J. Six**. 2003. The role of particulate organic matter in phosphorus cycling. Soil Sci. Soc. Am. J., 67:181-189.

2002

Six, J., C. Feller, K. Denef, S.M. Ogle, J.C. de Moraes Sa and A. Albrecht. 2002. Organic matter, biota and aggregation in temperate and tropical soils – effects of no-tillage. Agronomie., 22:755-775.

Six, J., P. Callewaert, S. Lenders, S. Degryze, S.J. Morris, E.G. Gregorich, E.A. Paul and K. Paustian. 2002. Measuring and understanding carbon storage in afforested soils by physical fractionation. Soil Sci. Soc. Am. J., 66:1981-1987.

Bossuyt, H., **J. Six**, and P.F. Hendrix. 2002. Aggregate protected carbon in no-tillage and conventional tillage agroecosystems using ^{14}C labeled plant residue. Soil Sci. Soc. Am. J., 66:1965-1973.

Denef, K., **J. Six**, R. Merckx, and K. Paustian. 2002. Short-term effects of biological and physical forces on aggregate formation in soils with different clay mineralogy. Plant Soil., 246:185-200.

Six, J., R.T. Conant, E.A. Paul, and K. Paustian. 2002. Stabilization mechanisms of soil organic matter: Implications for C-saturation of soils. Plant Soil., 241:155-176.

2001

Six, J., G. Guggenberger, K. Paustian, L. Haumaier, E.T. Elliott, and W. Zech. 2001. Sources and composition of physically defined soil organic matter fractions. Eur. J. Soil Sci., 52:607-618.

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Six, J., A. Carpentier, C. van Kessel, R. Merckx, D. Harris, W.R. Horwath and A. Lüsher. 2001. Impact of elevated CO_2 on soil organic matter and aggregate dynamics as related to changes in aggregate turnover and residue quality. Plant Soil., 234:27-36.

Bossuyt, H., K. Denef. **J. Six**, S.D. Frey, R. Merckx, and K. Paustian. 2001. Influence of microbial populations and residue quality on aggregate stability. Appl. Soil Ecol., 16:195-208.

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Six, J., E.T. Elliott, and K. Paustian. 2000. Soil macroaggregate turnover and microaggregate formation: A mechanism for C sequestration under no-tillage agriculture. Soil Biol. Biochem., 32:2099-2103.

Six, J., E.T. Elliott, and K. Paustian. 2000. Soil structure and soil organic matter: II. A normalized stability index and the effect of mineralogy. Soil Sci. Soc. Am. J., 64:1042-1049.

Six, J., K. Paustian, E.T. Elliott, and C. Combrink. 2000. Soil structure and soil organic matter: I. distribution of aggregate size classes and aggregate associated carbon. Soil Sci. Soc. Am. J., 64:681-689.

Six, J., R. Merckx, K. Kimpe, E.T. Elliott, and K. Paustian. 2000. A reevaluation of the enriched labile soil organic matter fraction. Eur. J. Soil Sci., 51:283-293.

Paustian, K., **J. Six**, E.T. Elliott, and H.W. Hunt. 2000. Management options for reducing CO_2 emissions from agricultural soils. Biogeochem., 48:147-163.

1999

Six, J., E.T. Elliott, and K. Paustian. 1999. Aggregate and soil organic matter dynamics under conventional and no-tillage systems. Soil Sci. Soc. Am. J., 63:1350-1358.

Guggenberger, G., S.D. Frey, **J. Six**, E.T. Elliott, and K. Paustian. 1999. Bacterial and fungal cell-wall residues in conventional and no-tillage agroecosystems. Soil Sci. Soc. Am. J., 63:1188-1198.

Six, J., P.A. Schultz, J.D. Jastrow, and R. Merckx. 1999. Recycling of sodium polytungstate used in soil organic matter studies. Soil Biol. Biochem., 31:1193-1196.

Guggenberger, G., E.T. Elliott, S.D. Frey, **J. Six**, and K. Paustian. 1999. Microbial contributions to the aggregation of cultivated grassland soil amended with starch. Soil Biol. Biochem., 31:407-419.

1998

Six, J., E.T. Elliott, K. Paustian, and J.W. Doran. 1998. Aggregation and soil organic matter storage in cultivated and native grassland soils. Soil Sci. Soc. Am. J., 62:1367-1377.

Books

Wall, D.H., R.D. Bardgett, V. Behan-Pelletier, J.E. Herrick, H. Jones, K. Ritz, **J. Six**, D.R. Strong, and W.H. van der Putten. 2012. Soil Ecology and Ecosystem Services. Oxford University Press, UK.

Invited and Refereed Chapters

Quinton, J.N., J. Mataix-Solera, E.C. Brevik, A. Cerdá, L. Pereg, **J. Six**, K. van Oost. 2015. *SOIL: A Journey through Time and Space.* In: Blöschl, G., Thybo, H., Savenije, H., eds. *A Voyage through scales*, pp. 93-98, Edition Lammerhuber, ISBN: 978-3-901753-84-8

Funk, R., U. Pascual, H. Joosten, Ch. Duffy, G. Pan, N. la Scala, P. Gottschalk, S. Banwart, N. Batjes, Z. Cai, **J. Six,** and E. Noellemeyer, 2014. Chapter 4 : *From Potential to Implementation: An Innovation Framework to Realize the Benefits of Soil Carbon.* In: Banwart, S. A., Noellemeyer, E., Milne, E., eds. Soil Carbon - Science, Management and Policy for multiple benefits. SCOPE Series Volume 71, 47-59 CABI, Wallingford, UK. ISBN: 9781780645322

Noellemeyer, E., and **J. Six**. 2014. Chapter 22: *Basic principles of soil carbon management for multiple ecosystem benefits.* In: Banwart, S. A., Noellemeyer, E., Milne, E., eds. Soil Carbon: Science, management and policy for multiple benefits. SCOPE Series Volume 71, 265-276 CABI, Wallingford, UK. ISBN: 9781780645322

Ogle, S.M., P.R. Adler, F.J. Breidt, S. Del Grosso, A. Franzluebbers, M. Liebig, B. Linquist, G.P. Robertson, M. Schoeneberger, **J. Six**, C. van Kessel, R. Venterea, T. West, 2014. Chapter 3: *Quantifying Greenhouse Gas Sources and Sinks in Cropland and Grazing Land Systems.* In: Quantifying Greenhouse Gas Fluxes in Agriculture and Forestry: Methods for Entity Scale Inventory. Office of the Chief Economist, U.S. Department of Agriculture, Technical Bulletin Number 1939. Washington, DC. 608 pages. April 2014. Eve, M., D. Pape, M. Flugge, R. Steele, D. Man, M. Riley Gilbert, and S. Biggar, Eds.

Kong, A.Y.Y, and **J. Six**. 2011. *Protocol: Isolation of Biophysical Microenvironments from Rhizosphere and Non-Rhizosphere Soil*. Proetheuswiki. http://prometheuswiki.publish.csiro.au/tiki-custom_home.php

Mérel, P., F. Yi, S. Bucaram, J. Lee, R. Howitt, and **J. Six**. *Incorporating yield information from a biogeochemical model into an agricultural production model to infer adoption of a new bioenergy crop*. In: Bio-economic Models Applied to Agricultural Systems: An Integrated Approach to

Relations between Agriculture, Environment and Natural Resources – Tools for Policy Analysis. G. Flichman, Ed.

Suddick, E.C., K. Steenwerth, G.M. Garland, D.R. Smart, and **J. Six**. 2011. *Discerning agricultural management effects on nitrous oxide emissions from conventional and alternative cropping systems: A California case study.* In: Understanding Greenhouse Gas Emissions from Agricultural Management; Guo, L., A.S. Gunasekara, and L.L. McConnel, Eds.; ACS Symposium Series Vol. 1072; American Chemical Society: Washington, DC, 2011. pp. 203-226.

Bugg, R.L., W. Horwath, **J. Six**, and M. Van Horn. 2011. *Practical Soil Ecology. In: Cover Crops For Vegetable Farming Systems*. Smith, R., M.L. Gaskell, R.L. Bugg, O. Daugovish, and M. Van Horn, Eds. University of California Agriculture and Natural Resources 8000 Series. pp. 19-30.

Kong, A.Y.Y, R. Gentile, P. Chivenge, S.J. Fonte, **J. Six**. 2010. *Trade-offs associated with using soil carbon sequestration as climate change mitigation*. In: Hillel, D. and Rosenzweig, C., eds. Handbook of Climate Change and Agroecosystems: Impact, Adaptation, and Mitigation. Imperial College Press, London, UK. pp. 365-392.

Denef, K., A.F. Plante, and **J. Six**. 2009. *Characterization of soil organic matter*. pp. 91-126. In: Soil Carbon Dynamics: An Integrated Methodology. W.L. Kutsch, M. Bahn, and A. Heinemeyer. Eds., Cambridge University Press. pp. 298

Jackson LE, F. Santos-Martin, A.D. Hollander, W.R. Horwath, R.E. Howitt, J.B. Kramer, A.T. O'Geen, B.S. Orlove, **J. Six**, S.K. Sokolow, D.A. Sumner, T.P. Tomich, and S.M. Wheeler. 2009. *Potential for adaptation to climate change in an agricultural landscape in the Central Valley of California*. Report from the California Climate Change Center. CEC-500-2009-044-D. pp. 170

De Gryze, S., R. Catala, R.E. Howitt, and **J. Six**. 2008. *Assessment of Greenhouse Gas Mitigation in California Agricultural Soils*. California Energy Commission, PIER Energy Related Environmental Research. CEC.500.2008.039.

Van Groenigen, K.J., M.A. de Graaff, **J. Six**, D. Harris, P. Kuikman, and C. van Kessel. 2006. *The Impact of Elevated Atmospheric [CO_2] on Soil C and N Dynamics: A Meta-Analysis*. In: Ecological Studies, vol. 187, pp. 373-392 "Managed Ecosystems and CO2 Case Studies, Processes, and Perspectives". J. Nösberger, S.P. Long, R.J. Norby, M. Stitt, G.R. Hendrey, H. Blum. Eds., Springer-Verlag Berlin Heidelberg

Krupnik, T.J., **J. Six**, J.K. Ladha, M.J. Paine and C. van Kessel. 2004. *An assessment of fertilizer nitrogen recovery efficiency by grain crops*. In: A.R. Mosier, J.K. Syers, and J.R. Freney, Eds. Agriculture and the Nitrogen Cycle: Assessing the Impacts of Fertilizer Use on Food Production and the Environment. SCOPE 65. Island Press, Washington. pp. 193-207.

Six, J. and J.D. Jastrow. 2002. *Soil Organic Matter Turnover*. In R. Lal. Ed., Encyclopedia of Soil Science, Marcel Dekker, NY. pp. 936-942.

Proceedings Chapters

Six, J. 2009. Quantifying nitrous oxide emissions from N fertilizer management practices. Proceedings of the California Plant and Soil Conference, Fresno, California.

Horwath, W.R., J. P. Mitchell and **J.W. Six**. 2008. Tillage and crop management effects on air, water, and soil quality in California. ANR Publication 8331

De Gryze, S. and **J. Six.** 2007. Assessing the potential for greenhouse gas mitigation in Californian soils. Proceedings of the international conference on The Future of Agriculture: Science Stewardship and Sustainability. Eds. L. Erickson, P. Kulakow, and M. Rankin. Kansas State University.

Six. J., 2007. Carbon and nitrogen dynamics in integrated no-tillage systems. Proceedings of the Reinvention and Future Prospects, Fifteenth Aapresid Congres, Rosario, Argentina.

White Papers

Oldenburg, C.M., M.S. Torn, K.M. DeAngelis, J.B. Ajo-Franklin, R.G. Amundson, C.J. Bernacchi, G.M. Bond, E.L. Brodie, M. Carerra, J.N. Christensen, A.B. Cunningham, B. Fouke, T.C. Hazen, A.K. Jain, M. Kleber, K.G. Knauss, S. Nakagawa, K.L. O'Hara, W.J. Parton, W.L. Silver, **J. Six**, W.I. Stringfellow, T.K. Tokunaga, T. Xu, and D. Zilberman. 2008. Biologically Enhanced Carbon Sequestration: Research Needs and Opportunities. Report on the Energy Biosciences Institute Workshop on Biologically Enhanced Carbon Sequestration, October 29, 2007, Berkeley, CA, Lawrence Berkeley National Laboratory Report LBNL-713E.

Antonioli, D., S. Apfelbaum, A. Arnold, R. Bayon, E. Bitan, D. Broekhoff, J. Clay, J. Cole, C. Cox, S. De Gryze, J. Dlott, K. Driver, L. Durschinger, J. Funk, K. Haugen-Kozyra, E. Holst, J. Kadyszewski, J. Kimble, R. Lal, T. LaSalle, D. Malin, L. Mathern, K. Newcombe, L. Olander, P. Ovitte, D. Reed, W. Reid, C. Rice, B. Salas, G. Schneider, J. Seager, R. Seaton, **J. Six**, C. Streck, R. Sutton, and R. Williams. Coalition on Agricultural Greenhouse Gases, Carbon and Agriculture: Getting Measurable Results. Version 1, April 2010.

COMMITTEES AND TASK FORCES

2022-present	Member of the Global Scientific Advisory Committee of the Global Soil Health Programme
2018-present	Member of the ETH for Development Steering Committee
2018	Member of the strategic research evaluation panel of the Department of Agroecology at Aarhus University
2018-present	Member of the Science and Impact Advisory Board of Rothamsted Research
2017-2020	Member of the Board of the Swiss Platform for Sustainable Cocoa.
2016-2019	Member of Biochar Research Advisory Board. USA.
2016-present	Member of the Research for Development (R4D) Committee, ETH Zurich.
2016-2017	Member of the International Scientific Committee for the 2nd Global Soil Biodiversity Conference (GSBC2). Nanjing, China.
2016-present	Member of the Organisation Committee of EuroSoil 2020-2021.
2016-2020	Member of the Working Group "Soils at risk. European Academies Science Advisory Countil (EASAC), Switzerland.
2015	Member of the Organisation Committee of World Food System Center Conference: "Tackling World Food System Challenges". Monte Verità, Ascona, Switzerland.
2015-present	Member of the International Scientific Advisory Council of the International Soil Reference and Information Centre (ISRIC)-World Soil Information.
2015-2019	Member of Scientific advisory committee for the project SQUARE, Teagasc, Ireland
2015-present	Member of Scientific Advisory Group of Agroscope's "Production2020" research initiative. Switzerland.
2014-2015	Member of Organizing Committee of "The Earth Living Skin: Soil, Life, and Climate Change." Conference. Bari, Italy.
2013-present	Scientific committee for Project "The potential of sustainable land use systems to adapt to climate change", FiBl, Switzerland.
2012-2014	Technical Advisor for Sustainable Sourcing of Global Agricultural Raw Materials project of the Agricultural Sustainability Institute, University of California - Davis
2011-present	Founding member of the Global Soil Biodiversity Initiative. USA.
2011-2012	Member of the Scientific Advisory Committee to Climate Action Reserve.

2011-2014	Member of the USDA Croplands/Grazing Lands Working Group on technical guidelines and scientific methods for the estimation of entity-scale greenhouse gas emissions and carbon sequestration
2011-2012	Member of the Science Advisory group of California Climate & Agriculture Network
2010-2015	Member of the Science Advisory group of the Global Agriculture Climate Assessment
2010-2014	Member of the New Zealand Agricultural Greenhouse Gas Research Centre International Science Advisory Group
2010	Panelist on the Regional Approaches to Climate Change Panel of the USDA-NIFA.
2010	Panelist for President's Council of Advisors on Science and Technology (PCAST) Carbon Offsets Working Group.
2009-2012	Science Advisor to Coalition on Agricultural Greenhouse Gases (C-AGG)
2009	Panelist: NSF CAREER program
2007	Co-organizer of Organized Oral Session (with Dr. S.G. Baer): "Grassland Restoration: Ecosystem Recovery across Time and Space." Ecological Society of America Annual Meeting, San Jose, CA.
2006	Panelist: NSF Ecosystem Studies Cluster
2005	Co-organizer of Organized Oral Session (with Dr. S.D. Frey and J. P. Schimel): "linking the scales from microbes to ecosystems" Ecological Society of America Annual Meeting
2004-2005	Member of the Committee on Research of the Academic Federation, University of California, Davis
2003	Co-organizer of the Symposium titled: "Nitrous Oxide Emissions from Soils: From Controls to Multi-Gas Approach." Soil Science Society of America meeting, Denver, Colorado.
2002-2012	Member of Soil Science Graduate Group, International Agricultural Development Graduate Group, and Horticulture and Agronomy Graduate Group, University of California, Davis.
2001-2005	Colorado State University Representative for Task 1. Basic processes and Mechanisms – of the Consortium for Agricultural Soils Mitigation of Greenhouse Gases (CASMGS).
2000	Co-organizer of the workshop titled: "The Role of Light Fraction and Particulate Organic Matter in Intensively Managed Systems." LTER All Scientists Meeting, Snow Bird, Utah
1998-2001	Student/postdoc representative. Space Committee, Natural Resource Ecology Laboratory, Colorado State University.

EDITORIAL BOARDS

2014-present	Executive Editor of SOIL
2008-2018	Section Editor for Plant and Soil
2010-2015	Subject Matter Editor for Ecospheres
2005-2015	Associate Editor for European Journal of Soil Science
2010	Guest Editor for Special Issue of Plant and Soil
2005	Guest Editor for Special Issue of Nutrient Cycling in Agroecosystems
2003-2010	Subject Editor for Soil Biology & Biochemistry
2003-2008	Consulting Editor for Plant and Soil

AWARDS

2022	Top Environmental Sciences Scientist in Switzerland
2021	Highly Cited Researcher 2021 by Clarivate Analytics Web of Science Group
2020	Highly Cited Researcher 2020 by Clarivate Analytics Web of Science Group
2019	Highly Cited Researcher 2019 by Clarivate Analytics Web of Science Group
2018	GDPE Distinguished Ecologist by Colorado State University
2017	Highly Cited Researcher 2017 by Thomson Reuters
2016	Highly Cited Researcher 2016 by Thomson Reuters
2015	Highly Cited Researcher 2015 by Thomson Reuters
2014	Philippe Duchaufour Medal of European Geosciences Union
2011	American Association for the Advancement of Science Fellow
2010-2015	University of California – Davis Chancellor's Fellow
2010	2010 Best Paper Award SSSAJ for Denef et al. 2004 paper.
2002	Excellence in Presentation Award-Division S-7 Forest & Range Soils, Soil Science Society of America.
1998	Outstanding Graduate Student Award-Division S6 Soil & Water Management & Conservation, Soil Science Society of America.
1997	Travel award for the symposium "Soil Respiration: Implications for Climate change" held at the 1997 Annual Soil Science Society of America Meeting.

MEMBERSHIPS IN SCIENTIFIC SOCIETIES

Soil Science Society of America; American Geophysical Union; Soil Ecology Society; Ecological Society of America; American Association for the Advancement of Science

PROPOSAL REVIEWER (1999-PRESENT)

Agence National de La Recherche, CAMS Mini-Grant Proposal Program, Canadian Agri-Food Research Council, The Chilean Research Fund Council (FONDECYT), Czech Science Foundation (GACR), Deutsche Forschungsgemeinschaft, Israel Science Foundation; Kansas NSF EPSCoR, National Aeronautics and Space Administration, Natural Sciences and Engineering Research Council of Canada, North Central Region Sustainable Agriculture Research and Education (NCR-SARE) Program, Packard Foundation, The Rockefeller Foundation, United States National Science Foundation (Ecosystems Science Cluster; Geobiology & Low Temperature Geochemistry Program; Geosciences Program; OISE - Americas Program; Long-term Research in Environmental Research), National Institute for Climatic Change Research (NICCR), Swiss National Foundation, The Netherlands Organisation for Scientific Research, United States Department of Agriculture/National Research Initiative, and United States Department of Energy.

MANUSCRIPT REVIEWER (1998-PRESENT)

Advances in Environmental Research; Agricultural and Food Science; Agriculture, Ecosystems & Environment; Agronomie: Agriculture & Environment; Applied Soil Ecology; Arid Land Research and Management; Australian Journal of Soil Research; Bioenergy Research; Biogeochemistry; Biogeosciences; Biology and Fertility of Soils; Bioresource Technology; Bioscience; Canadian Biosystems Engineering; Canadian Journal of Soil Science; Catena; Computers and Electronics in Agriculture; Ecological Applications; Ecological Complexity; Ecological Engineering; Ecology; Ecology Letters; Ecosystems; Environmental Management; Environmental Resource & Economics; European Journal of Soil Biology; European Journal of Soil Science; Field Crops Research; Forest Ecology and Management; Forest Science; Frontiers in Ecology and the Environment; Gayana Botanica; Geoderma; Global Biogeochemical cycles; Global Change Biology; Hydrology and Earth Systems Science Discussions; Journal of Plant Nutrition and Soil Science; Journal of Agronomy; Journal of Environmental Quality; Journal of Geophysical Research; Journal of Hydrology; Journal of Tropical Ecology; Journal of Soil and Water Conservation; Nature; Nature Climate Change; Nature Geosciences; New Zealand Journal of Agricultural Research; Microbial Ecology; New Phytologist; Nutrient Cycling in Agroecosystems; Oecologia; Organic Geochemistry; Pedobiologia; Pedosphere; Plant and Soil; Proceedings of the National Academy of Sciences; Soil and Tillage Research; Soil Biology and Biochemistry; Soil Science; Soil Science Society of American Journal; Trends in Microbiology; Vadose Zone Journal; Water Resources Research.

INVITED PRESENTATIONS

Keynotes and Plenaries

Six, J. 2018. Sustainable agriculture: From science to practice. Distinguished Ecologist Award. Fort Collins, USA.

Six, J. 2018. Elucidating ecology for agriculture. Distinguished Ecologist Award. Fort Collins, USA.

Six, J. 2017. Potentials and caveats in the use of isotopes to determine soil organic matter dynamics and stabilization. Isocycles 2017. Ascona, Switzerland.

Six, J. 2017. Agroecology: From Understanding to Practice. Ecology and Agriculture Summit for Young scientist; Chize, France.

Six, J. 2017. Climate Smart Agriculture and forest conservation to foster SOC sequestration and reduce land degradation. GSOC17 - Global Symposium on Soil Organic Carbon; FAO HQ - Rome, Italy.

Six, J. 2016. Agricultural soils and climate change: a cross-scale analysis. Nederland Aardwetenschappelijk Congres. Veldhoven, the Netherlands.

Six, J. 2015. Managing soils to serve. Soil Science Society of Ireland event to mark the FAO International Year of Soils, Dublin, Ireland.

Six, J. 2015. Drivers of soil organic matter stabilization – from the micro to the global scale. 5th International Symposium on Soil Organic Matter, Göttingen, Germany.

Six, J. 2015. A cross-scale analysis of sustainable agroecosystems. Eco Intensive Agriculture Conference, Amsterdam, Netherlands.

Six, J. 2015. Food systems resilience in theory and practice: organic agriculture as a prototype? Public Lecture of the Annual Conference of the Society for Tropical Ecology, ETH Zurich, Switzerland.

Six, J. 2014. Sustainable management of Mollisols: A US perspective. Sino-German Workshop, Harbin, China.

Six, J. 2014. A Soil's perspective on sustainable agriculture. Duchaufour Medal Ceremony, European Geosciences Union, Vienna, Austria.

Six, J. 2013. The interdisciplinary challenges to understand and ensure agroecosystem functioning. 9th Annual symposium of the PhD program in Sustainable Agriculture, Tanikon, Switzerland.

Six, J. 2013. The biotic and abiotic drivers of aggregate dynamics. Plenary talk at the International Workshop on "Soil Structure and its Functions in Ecosystems", Nanjing, China.

Six, J. 2013. Maintaining soil ecosystem services under global change. Keynote at the Soil Systems and Critical Zone Processes Integrate Life Support Function across Disciplines Conference, Monte Verita, Switzerland.

Six, J. 2012. Influence of agricultural management on soil carbon and nutrient dynamics: A soil aggregate perspective. Keynote at the Regulation of Soil Organic Matter and Nutrient Turnover in Agriculture Workshop, Witzenhausen, Germany.

Six, J. 2012. Challenges and opportunities for sustainable agroecosystem science. Keynote at the inauguration of the World Food Systems Centre, Zurich, Switzerland.

Six, J. 2012. Opportunities and challenges for sustainable agriculture: A global perspective. Plenary at the XIX Latin American Soil Science Congress, Mar Del Plata, Argentina.

Six, J. 2011. The dire future of soil organic matter under global change. *Keynote* at the 3rd International Symposium on Soil Organic Matter: Organic Matter Dynamics – from Soils to Oceans. Leuven, Belgium.

Six, J. 2009. Can we link soil quality to agroecosystem services? A belowground perspective. *Plenary Russell Lecture* at the British Soil Science Society – Soil Science Society of Ireland joint meeting. Wexford, Ireland

Merckx, R., J. Six, and K. Van Oost. 2009. Soil tillage and carbon sequestration – the elusive link. *Keynote* at the International Symposium on Soil Organic Matter Dynamics: Land Use, Management, and Global Change. Colorado Springs, Colorado.

Six, J. 2008. Interactions between soil microstructures and biota control ecosystem functioning. *Keynote* at 11th National Soil Science Congress of China, Beijing, China.

Six, J. 2007. Not organic or chemical fertilizer, but the combination of the two is sustainable. *Featured "Speaker of the Year"*, Plant Sciences Combined Continuing Conference, Davis, California.

Six, J. 2007. Carbon and nitrogen dynamics in integrated no-tillage systems. *Keynote* at the Reinvention and Future Prospects, Fifteenth Aapresid Congres, Rosario, Argentina.

Six, J. 2007. Carbon and nitrogen cycling in agroecosystems: Trade-offs across scales. *Keynote* at the Organic Matter Dynamics in Agroecosytems Conference, Poitiers, France.

Six, J. 2005. Soil Structurall
and Biological Control on Agroecosystem Functioning. *Francis Clark Lectureship*. American Society of Agronomy Meeting. Salt Lake City, Utah.

Six, J. 2004. The interactions between plant growth, soil biota and soil physicochemical characteristic determine soil organic carbon sequestration rate and amount. *Keynote* at the Joint WG1-3 Meeting of COST-Action 627: "Carbon Storage in European Grasslands", Gent, Belgium.

Six, J., H. Bossuyt, S. Degryze, and K. Denef. 2002. A history of research on the link between soil biota, soil organic matter stabilization, and aggregate formation. *Keynote* at the Advances in Soil Structure Research Workshop, Prince Edward Island, Canada.

Six, J., C. Feller, K. Denef, S.M. Ogle, J.C. de Moraes Sa, and A. Albrecht. 2001. Organic matter, biota and aggregation in temperate and tropical soils. *Keynote* at the 11th International Nitrogen Workshop. Reims, France.

Symposiums

Six, J. 2020. Soil health across the rural-urban nexus in Sub-Saharan Africa. Panel on Soils in the Anthropocene: Linking Soil Health Indicators to Functions. American Geophysical Union, San Francisco, USA.

Six, J., M. Necpalova, J. Lee. 2017. Simulating productivity and soil greenhouse gas emissions from Swiss cropping systems. Plant Science Center Syngenta Symposium. Poiseux, Switzerland.

Six, J. 2016. Resilience in food systems. Panel on Food security – building resilience into the world's food system. American Association for the Advancment of Science (AAAS), Washington DC, USA

Six, J. 2016. Soil biodiversity and human health. Panel on Soil biodiversity: a common ground for sustainability. American Association for the Advancment of Science (AAAS), Washington DC, USA

Six, J. 2015. Manageing organic and inorganic inputs for short- and long-term agroecosystem services. Panel on Enhancement of ecosystem services governed by soils through sustainable management, World Sustainability Forum, Basel, Switzerland.

Six, J., A. Berhe, S. Yanni, S. De Gryze, J. Gillabel, and K. Van Oost. 2013. Controls on deep versus near-surface soil CO_2 production and SOM turnover. American Geophysical Union. San Francisco, California.

Six, J. 2012. Greenhouse Gas Mitigation Options for California Agriculture. California Air Resource Board Chair Seminar, Sacramento, California.

Six, J. 2012. Managing soil organic matter for multiple agroecosystem services. Symposium at the XIX Latin American Soil Science Congress, Mar Del Plata, Argentina.

Six. J., and A.Y.Y. Kong. 2010. Trade-Offs Associated with Soil Carbon Sequestration in ecosystems as Climate Change Mitigation. American Geophysical Union. San Francisco, California.

Six, J. 2010. Greenhouse gas emissions in conventional and alternative cropping systems of California's Central Valley. *Symposium*: Understanding Greenhouse Gases from Agriculture. American Chemical Society. San Francisco, California.

Six, J. 2009. Incorporating physicochemical protection by the soil matrix into biogeochemical models. *Symposium*: Quantifying and modeling soil structure dynamics. American Society of Agronomy meeting. Pittsburgh, Pennsylvania.

Six, J. 2009. Trade-offs for sustainable agroecosystem management within the complex interactions between resources, soil biota, plants, soil structure, and C and N cycling. *Symposium*: How Can Soil Microbial Ecology Contribute to the Sustainability of Agricultural Systems? Ecological Society of America, Albuquerque, New Mexico.

Six, J. 2008. Controls on greenhouse gas emissions and mitigation in agroecosystems. *Symposium*: Global Climate Change and Agriculture: Interactions, Land-Use Patterns, and Educational Connections. Ecological Society of America, Milwaukee, Wisconsin.

De Graaff, M.A., and J. Six. 2008. Interactions between plants and soil nutrient cycling under elevated CO2: Implications for soil C sequestration. *Symposium*: Building Bridges: Grasslands to Rangelands. Louisville, Kentucky.

Six, J., A. Wolf, and D.R. Rolston. 2005. Ecosystem Level Modeling for Estimating C Sequestration Potential and Greenhouse Gas Emissions. *Symposium*: Climate Change: Challenges and Solutions for California's Agricultural Landscape. Davis, California.

Six, J. 2004. Chemical Nature and Turnover of Carbon Associated with Diagnostic Aggregate Fractions. Symposium: Ecosystems in Flux: Molecular and Stable Isotope Assessments of Soil Organic Matter Storage and Dynamics." American Geophysical Union Meeting, San Francisco, California.

Six, J. 2004. Physical separation and chemical characterization of aggregate-associated carbon pools to measure and understand soil organic matter dynamics. Symposium: Meaningful Pools in Determining Soil C and N Dynamics. American Society of Agronomy Meeting, Seattle, Washington.

Six, J. 2004. Clarifying limits to soil C sequestration: Equilibrium versus saturation. Symposium: Can Agriculture and Energy Partners Use Soil Carbon Sequestration to Offset Greenhouse Gases? College Station, TX, USA.

Six, J., K. Paustian, S. Degryze, P. Callewaert, S. Lenders, S.J. Morris, R. Merckx, E.G. Gregorich and E.A. Paul. 2001. Physical controls on C and N dynamics in afforested agricultural soils. American Society of Agronomy meeting. Charlotte, North Carolina.

International invitations

Six, J. 2020. Managing soil fertility for crop production in Sub-Saharan Africa. University of Tuscia, Italy.

Six, J. 2018. Sustainable agriculture in Africa: from basic science to practice. International Institute of Tropical Agriculture, Nairobi, Kenya.

Six, J. 2018. Sustainable cocoa value chains. ChocoTec conference, Cologne, Germany.

Six, J. 2018. Improving soil fertility to enhance crop yields: from science to practice. Conference on Scientific innovation for a sustainable development of African agriculture. Ghent, Belgium.

Six, J., L. Pereg, and E. Brevik. 2017. Soil biodiversity and human health. European Geophysical Union Meeting, Vienna, Austria.

Six, J. 2017. Understanding sustainable agroecosystems for practice. University of Kwazu Natal, Pietermarzburg, South Africa.

Six, J. 2017. Sustainable Agroecosystems: from basic understanding to practice. Iowa State University, Ames, USA.

Six, J. 2016. Managing soil biota to enhance agroecosystem services. Soil Ecology Workshop. Luntern, The Netherlands.

Six, J. 2015. Soil organic carbon fractionations: A question or the means for a question? 5th International Symposium on Soil Organic Matter. Göttingen, Germany.

Six, J. 2015. Ensuring food security through agroecology. Feeding the world: the contribution of research in agricultural chemistry to sustainable development. Piacenza, Italy.

Six, J. 2015. Ensuring food availability through agroecological principles: A cross-scale analysis. JRC, Ispra, Italy.

Six, J. 2014. Elucidating sustainable agroecosystems across scales and disciplines. Earth Institute, Columbia University, New York, USA.

Six, J. 2014. Preserving soil system services under global change. China Agricultural University, Beijing, China.

Six, J. 2014. A multi-scale and coordinated multidisciplinary approach for sustainable agriculture. University of Aberdeen, UK.

Six, J. 2014. A multi-scale and inter-disciplinary approach towards sustainable agroecosystem management. Syngenta, Jealott's Hill, UK.

Six, J. 2013. Elucidating sustainable agriculture across scales and disciplines to bring it to practice. Institute of Bio- and Geosciences, Julich Forschungszentrum, Julich, Germany.

Six, J. 2013. Defining sustainable agriculture across scales and disciplines to bring it to practice. At symposium: Challenges and Opportunities for Sustainable Agroecosystem Research. Department of Soil Science, University of São Paulo, Brasil.

Six, J. 2013. Sustainable agriculture: From understanding across scales and disciplines to practice. University of Louvain. Louvain-la-Neuve, Belgium.

Six, J. 2013. An agroecological perspective on food security. 11.11.11 NGO, Brugge, Belgium.

Six, J. 2013. Mitigation of greenhouse gas emissions in California agriculture: can biochar play a role? California Energy Commission. Sacramento, USA.

Six, J. 2013. Managing soil biota for Food Security. Global Soil Biodiversity Institute workshop. Fort Collins, Colorado.

Six, J. 2012. The link between soil organic matter stabilization and aggregate formation: Theory and application. Summer school "Molecular and structural complexity of soil organic matter formation and turnover". Freising, Germany.

Spencer, R.G.M., P.J. Hernes, A.K. Aufdenkampe, A. Stubbins, P. Gulliver, A. Baker, and J. Six. 2011. Geochemistry and reactivity of exported Congo Riverine organic matter. International Symposium on Soil Organic Matter 2011 – Organic matter dynamics from soils to oceans, Leuven, Belgium.

Six, J. 2011. Soil carbon management for climate change mitigation. New Zealand Agricultural Greenhouse Gas Research Centre Conference, Palmerston North, New Zealand.

Six, J. 2010. Ecological interactions at the plant-soil interface in sustainable agroecosystems. Hanoi Agricultural University, Hanoi, Vietnam.

Six, J. 2008. Carbon saturation: Concept and implications. China University of Agriculture, Beijing, China.

Six, J. 2007. Linking microbial activity, soil structural dynamics, and ecosystem functioning. Netherlands Institute for Ecology, The Netherlands.

Six, J. 2007. Opportunities and challenges of conservation agriculture: A global perspective. Kopenhagen University, Denmark.

Six, J. 2007. Discerning the soil microenvironments for N_2O fluxes. DIARP Workshop. Wageningen University, Wageningen, The Netherlands.

Six, J., A.Y.Y. Kong, S. De Gryze. 2006. Interactions between soil microstructures and biota control on ecosystem functioning. World Congress of Soil Science, Philadelphia.

Six, J. 2006. Physical fractionations: Potentials and limits. Alterra, Wageningen University, Wageningen.

Six. J. 2005. Carbon cycling in conservation agriculture: From the microscale to the regional scale. CIMMYT, Mexico City.

Six, J. 2005. Understanding and predicting soil organic matter turnover in a changing global environment. Departimento di Scienze Ambientali, Second University of Napoli, Caserta, Italy.

Six, J. 2005. Inter-relationship between soil aggregation, soil organic matter, soil biota, and agroecosystem management. University of Zimbabwe, Harare, Zimbabwe.

Six, J., 2001. Soil organic matter dynamics in temperate and tropical agroecosystems. Departimento di Scienze Ambientali, Second University of Napoli, Caserta, Italy.

Six, J. 2000. Aggregate and soil organic matter dynamics in agro-, grassland and forest ecosystems. Workshop on Improved fallows by legume plants (trees, shrubs and grasses) in Eastern and Southern Africa. ICRAF, Kenya.

Six, J. 1998. Aggregate turnover and SOM dynamics in agricultural soils: a link between temperate and tropical soils. Sustainable agriculture development of the uplands of South Vietnam Symposium. Ho Chi Minh City, Vietnam.

Six, J. E.T. Elliott, and K. Paustian. 1997. Aggregation and soil organic matter storage in cultivated and native grassland soils. Department of Water- and Land Management, KULeuven, Leuven, Belgium.

National invitations

Six, J. 2020. Soil health across the rural-urban nexus in Sub-Saharan Africa. D-ARCH, Zurich, Switzerland.

Six, J. 2020. Sustainable Agroecosystems: a focus on Sub-Saharan Africa. NADEL, Zurich, Switzerland.

Six, J. 2019. Sustainable agriculture across scales and disciplines. Visions for a Sustainable Agriculture. University of Neuchatel, Neuchatel, Switzerland.

Six, J. 2018. Basic ecological understanding for sustainable agriculture. Agroscope, Reckenholz, Switzerland.

Six, J., M. Necpalova, J. Lee. 2018. COMET Global: Whole-farm GHG estimation and environmental diagnostics platform. NFP 68 closing ceremony. Grangeneuve, Switzerland.

Six, J. 2016. Soil structure, ecosystem services and resilience. Soil Structure Workshop, Agroscope, Reckenholz, Switzerland.

Six, J. 2016. Agroecology: Soil, water and nutrient processes. World Food System Center Summer School. Rheinau, Switzerland.

Six, J. 2016. Sustainable agriculture across scales and disciplines. Visions for a Sustainable Agriculture. University of Neuchatel, Neuchatel, Switzerland.

Six, J. 2016. Smallholder farmers and soil perspective on technology. Technology Foresight Syngenta, Stein, Switzerland.

Six, J. 2015. Agroecology across scales to feed the planet. International Association of Agricultural Students. Zurich, Switzerland.

Six, J. 2015. Agroecology: Soil, water and nutrient processes. World Food System Center Summer School. Rheinau, Switzerland.

Six, J. 2015. Sustainable agriculture across scales and disciplines. Visions for a Sustainable Agriculture. University of Neuchatel, Neuchatel, Switzerland.

Six, J. 2015. Food production and farming systems around the world. NADEL, Zurich, Switzerland.

Six, J. 2015. A soil's perspective on sustainable agriculture. Syngenta, Stein, Switzerland.

Six, J. 2014. Ensuring food availability through agroecological principles: A cross-scale analysis. Nahrungssicherheit. Academia Engelberg, Engelberg, Switzerland.

Six, J. 2014. Integration of biophysical and economic modeling for policy analysis. PSC Summer School on Green revolution reloaded: Emerging technologies for sustainable crop production. Einseideln, Switzerland.

Six, J. 2014. Sustainable agroecosystems: need for future research and policy. Sustainable Agroecosystems workshop, Bundesamt fur Landwirtschaft (BLW), Bern, Switzerland.

Six, J. 2014. Elucidating sustainable agroecosystems across scales and disciplines for food security. EPFL, Lausanne, Switzerland.

Six, J. 2013. Understanding and practicing sustainable agriculture across scales and disciplines. University of Basel, Basel, Switzerland.

Six, J. 2013. Agricultural management options for reducing nitrous oxide emissions. Sustainable Plant Systems Seminar. ETH Zurich, Zurich, Switzerland.

Six, J. 2013. Sustainable Agriculture: From understanding across scales and disciplines to practice. FiBL, Frick, Switzerland.

Six, J. 2012. Elucidating sustainable agriculture for practice across scales and disciplines. Boise State University, Boise, Idaho.

Six, J. and E. Carrington. 2011. Soil organic matter and land use change: the soil carbon saturation effect. American Geophysical Union, San Francisco, California.

Six, J. T. Kennedy, G. Garland, and E. Suddick. 2011. Greenhouse gas emissions and mitigation in perennial and annual agroecosystems of California. American Society of Agronomy meeting, Austin, Texas.

Six, J. 2011. Agricultural practices that reduce greenhouse gas emissions. NRCS, Extension, and RCD staff workshop "Understanding Climate Change Mitigation & Adaptation in California Agriculture. Five Points, California.

Six, J. 2011. Soil management: Impacts on greenhouse gas emissions and carbon sequestration. CALCAN Summit, Davis, California.

Six, J. 2011. Status of science and measurements of N_2O emissions in agroecosystems. C-AGG meeting, Sacramento, California.

Six, J. 2011. Managing short- versus long-term C and N dynamics in agroecosystems. Michigan State University, Kellogg Biological Station, Hickory Corners, Michigan.

Six, J. 2011. Trade-offs in organic matter management for short- and long-term agroecosystem services. Cornell University, Ithaca, New York.

Six, J. 2011. Managing organic matter for short- and long-term ecosystem services. Columbia University, New York, New York.

Six, J. 2010. Ecological interactions at the plant-soil interface in agricultural systems. University of California – Merced, Merced, USA.

Six, J. 2009. Quantifying nitrous oxide emissions from N fertilizer management practices. California Plant and Soil Conference, Fresno, California.

Six, J. 2008. Carbon sequestration and mitigation of N_2O and CH_4 emissions. Green Acres, Blue Skies Agriculture & Air Quality –Issues and Solutions- A Stakeholders Conference. Davis, California.

Six, J. 2008. Sustainable, environmentally friendly, and cost-effective production of biomass for energy efficient biofuels. Joint Forum on Bioenergy Sustainability and Life Cycle Analysis, Sacramento, California.

Six, J. 2008. Linking microbial activity, soil structural dynamics, and ecosystem functioning. Pacific Northwest National Laboratory, Richland, Washington.

Six, J. 2008. Organic agroecosystem management for sustainability: a belowground perspective. *Farming for the Future Seminar Series*. University of New Hampshire, New Hampshire.

Six, J., S. De Gryze, R. Howitt, R. Catala, and S. Wicks. 2006. Regional Projections of Net Greenhouse Gas Emissions and Reductions in California Agriculture. Third Annual Climate Change Research Conference. Sacramento, California.

Six, J. 2005. Interactions between Aggregate Turnover, Soil Biota, and Soil Properties Control Soil Organic Matter Stabilization versus Destabilization. 2nd International Conference on Mechanisms of Organic Matter Stabilization and Destabilization in Soils. Asilomar, California.

Six, J. 2005. Mitigating Greenhouse Gases – Agriculture's role. Second Annual Climate Change Research Conference and First Scientific Conference, West Coast Governors' Global Warming Initiative. Sacramento, California.

Six, J. 2005. Mitigating Greenhouse Gases – Agriculture's role. Soil Carbon Sequestration in California Agriculture: Technical Issues, Economics and Policy Applications. Five Points, California

Six, J. 2005. Integrating the Biology and Physics of the Soil Environment. Organized Oral Session: "Linking the scales from microbes to ecosystems." Ecological Society of America Annual Meeting. Montreal, Canada.

Six, J. 2005. Greenhouse Gas Mitigation in California – Agriculture's role. Air and Environmental Issues Advisory Committee, California Farm Bureau Federation. Sacramento, California.

Six, J. 2000. Soil carbon sequestration: Linking aggregate and soil organic matter dynamics. School of Natural Resources, Ohio State University, Columbus, OH, USA.

Six, J., E.T Elliott, and K. Paustian. 1998. Carbon sequestration in no-tillage: a process-level explanation. Department of Agronomy and Range Science, UC Davis, Davis, CA, USA.

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