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**SOIL SCIENCE POSTDOCTORAL POSITIONS**

<p><b>POSITION</b></p>	<p><b>Three Postdoctoral Positions for Soil-based Climate Change Mitigation Strategies at North Carolina State University</b></p>
<p><b>JOB DESCRIPTION</b></p>	<p>As part of a new initiative in the Department of Crop and Soil Sciences at NCSU, we are hiring 3 soils postdoctoral research positions related to mitigating climate change through soil carbon sequestration and GHG emission reduction. This collaborative project includes: examining microbial mechanisms controlling SOC sequestration and GHG emissions (<b>2 Positions</b>) and monitoring and measuring GHG and SOC dynamics through a pipe-line approach from lab to field scale (<b>1 Position</b>). These postdoctoral associates would work on specific directives and would also actively collaborate between projects. See below for specific details on the respective positions.</p> <p><b>Two Postdoctoral Research Associates in the Soil Microbial Ecology Lab, NC State University</b> (Full-time temporary employment 2.5 years)</p> <p>The Soil Microbial Ecology Lab is seeking two highly motivated postdoctoral research associates to develop bio-physical-chemical mechanisms underlying soil carbon sequestration, nitrogen retention, and greenhouse gas (GHG) emissions mitigation following soil amendments of byproducts generated from bioenergy production systems. The successful candidates need to demonstrate strong expertise and skills in soil carbon and nitrogen transformations and dynamics. <b>Major responsibilities include:</b> (1) designing robust lab-scale experiments to assess soil texture-based potentials of byproducts in soil carbon sequestration, nitrogen retentions and GHG emissions mitigation; (2) using various tools (e.g., spectroscopy, microscopy, chromatography, next generation sequencing) to develop fundamental knowledge of byproduct traits-based controls on soil biochemical and biophysical processes; and (3) publishing research findings in high-quality journals. <b>Qualifications:</b> Ph.D. in a discipline relevant to soil carbon and nitrogen dynamics (e.g., biogeochemistry, microbiology, ecology); experience with contemporary techniques in soil physics, chemistry, and microbiology; and excellent writing and communication skills in English.</p> <p><b>One Postdoctoral Research Associate in the Sustainable Soil Lab, NC State University</b> (Full-time temporary employment 2 years)</p> <p>We are seeking a highly motivated postdoctoral research associate to develop and expand the GHG program in the Sustainable Soils Lab on a range of scales from lab column studies to micrometeorological measurements. The successful</p>

	<p>candidate needs to demonstrate strong expertise in the measurement of GHG emissions, management of GHG analytical equipment, fundamental knowledge in nitrogen and carbon cycling and experience with field-based research. <b>Major Responsibilities include:</b> (1) Managing and expanding a continuous monitoring experiment using automated chambers for measurement of CO<sub>2</sub>, N<sub>2</sub>O, CH<sub>4</sub>, and NH<sub>3</sub> located within a long-term study in eastern NC; (2) developing a controlled lab column design for continuous GHG measurements and SOC dynamics; (3) initiating and managing a field-scale micrometeorological experiment focused on sustainable soil management practices. <b>Qualifications:</b> Ph.D. in a discipline relevant to soil carbon and nitrogen dynamics, micrometeorology and agronomy; experience using and maintaining analytical equipment used to quantify GHGs and SOC; experience managing field experiments (preferably agricultural); and excellent writing and communication skills in English.</p>
<b>LOCATION</b>	<p><b>Crop &amp; Soil Sciences Department, North Carolina State University, Raleigh, NC</b></p> <p>We are unique among our U.S. and international peers due to our broad and intensive expertise spanning land use, agriculture, and environmental protection. Our outstanding faculty and strong collaborations with other scientists at our Research I university and elsewhere make us an internationally-recognized center for innovative research and graduate training. We seek high quality students pursuing careers in soil science and related fields.</p> <p>The Raleigh-Durham area consistently ranks among the best places to live in the United States, largely due to its vibrant intellectual community and ample access to recreational and cultural activities.</p>
<b>HOW TO APPLY:</b>	<p>Positions will remain open until three qualified candidates are identified or hired. For Applicants interested in the <b>Microbial Ecology Lab</b> please contact Dr. Wei Shi (<a href="mailto:wei_shi@ncsu.edu">wei_shi@ncsu.edu</a>) and those interested in the <b>Sustainable Soils Lab</b> contact Dr. Alex Woodley (<a href="mailto:alwoodle@ncsu.edu">alwoodle@ncsu.edu</a>). Please send an updated CV including a complete list of publications and a list of references.</p>
<b>DATE AVAILABLE:</b>	<p>February 2021 or until a suitable candidate is identified</p>
<p><b>North Carolina State University is an equal opportunity, affirmative action employer and actively seeks diversity among its employees.</b></p>	