

# ES SEMINAR SERIES

12:30-1:30 pm  
03/09/2022

COB2-140/[Zoom](#)

# Rebecca Ryals

*Transforming Organic Wastes as  
Resources for Food, Climate, and People*



**Abstract:** My research program is motivated by a complex sustainability challenge – how do we grow healthy food for a growing global population in an equitable way, while protecting ecosystems and the services they provide? This question is inherently interdisciplinary. To address it, collaborate with researchers from multiple disciplines and with agricultural professionals and practitioners. The specific research questions that I pursue tackle critical gaps in knowledge, yielding scientific knowledge beneficial to society. My core research foci are soil carbon dynamics, soil health, greenhouse gas emissions, nutrient cycling and loss, plant production, organic resource management, climate change mitigation, and sustainable development. A major research theme in my lab is the capture, transformation, and beneficial reuse of organic wastes as resources to rebuild soil carbon and contribute to a more productive and just food systems. In this presentation, I will discuss findings from research from interdisciplinary collaborations in California and Haiti that aim to rethink wasted organic resources as a means to promote circular nutrient cycling, foster resilience agriculture, and provide benefits to communities living in these areas.

**Bio:** Dr. Ryals is an Assistant Professor of Agroecology at the University of California, Merced. Dr. Ryals teaches courses in ecology, sustainable agriculture, ecosystem-based climate solutions, and anti-racism in environmental systems. She serves on the Faculty Advisory Committee on Sustainability, faculty co-advisor to the Living Learning Communities (Carson House: Sustainable Futures), and chair the Merced Vernal Pool and Grassland Reserve Faculty Advisory Committee. She is an Associate Editor for *Agronomy Journal*, a member of the Editorial Review Board for the journal *Biogeochemistry*, and co-convenor of a session on nitrogen cycling at the American Geophysical Union conference. Dr. Ryals frequently give talks to public groups, including Master Gardeners, community gardeners, rock climbers and local food activists, and local governmental agencies.

