Stanford

# Anna Gomes

- Ph.D. Student in Earth System Science, admitted Autumn 2020
- Responsible Purchasing Fellow, Business Affairs

## Bio

### BIO

My main interests lie within anthropogenic climate change, environmental science, and agriculture. The complex system dynamics and interconnections between agriculture and the environment including nutrient cycling, energy use, and greenhouse gas emissions are a few of the most critical challenges for today's soil scientists. After completing a master's degree in Sustainability Science and Environmental Studies at Lund University in Sweden, researching farmer adoption of practices which mitigate GHGs from arable soils in the Netherlands at Wageningen University, I started a PhD in Earth System Science at Stanford University, aiming to focus on soil and environmental biogeochemistry. In parallel to my work in academia, I have been working on a start-up to address food waste and food insecurity in CA (Ugly Food Market), in addition to being a team member on several projects including a sharing library (Circle Centre), a soil science educational platform (Soil Life), and other sustainability related initiatives.

### HONORS AND AWARDS

- Fellowship Recipient, EDGE, Enhancing Diversity in Graduate Education Doctoral Program (2020)

### LINKS

- Linkedin Account: https://www.linkedin.com/in/anna-gomes-85ab6b114/

## Publications

### PUBLICATIONS

- **Nitrogen mineralization of cover crop residue depends on carbon-to-nitrogen ratio and soil temperature.** *Journal of environmental quality*
  Gomes, A., Gutierrez, D., Castaneda, S., Brennan, E., Smith, R., Fendorf, S.
  2026; 55 (1): e70107
- **Soil carbon concentration drives anoxic microsites across horizons, textures, and aggregate position in a California grassland** *GEODERMA*
  Lacroix, E. M., Gomes, A., Honeyman, A. S., Huy, K. R., Fendorf, S., Noel, V., Aeppli, M.
  2025; 454
- **Microbial Proxies for Anoxic Microsites Vary with Management and Partially Explain Soil Carbon Concentration.** *Environmental science & technology*
  Lacroix, E. M., Gomes, A., Heitmann, G. B., Schuler, D., Dekas, A. E., Liptzin, D., Aberle, E., Watts, D. B., Nelson, K. A., Culman, S., Fendorf, S.
  2024
- **Long-term reduced tillage and winter cover crops can improve soil quality without moisture** *CALIFORNIA AGRICULTURE*
  Gomes, A., DeVincentis, A. J., Solis, S., Zaccaria, D., Munk, D., Bali, K., Shrestha, A., Gould, K., Mitchell, J.
  2023; 77 (1): 4-14
- **Contributions of anoxic microsites to soil carbon protection across soil textures** *GEODERMA*

Lacroix, E. M., Mendillo, J., Gomes, A., Dekas, A., Fendorf, S.
2022; 425

- **Impacts of winter cover cropping on soil moisture and evapotranspiration in California's specialty crop fields may be minimal during winter months Results from a 3-year study suggest that processing tomato and almond growers can adopt winter cover cropping without changing irrigation practices** *CALIFORNIA AGRICULTURE*
  DeVincentis, A., Solis, S., Rice, S., Zaccaria, D., Snyder, R., Maskey, M., Gomes, A., Gaudin, A., Mitchell, J.
  2022; 76 (1): 37-45

- **Time to Transition: Barriers and Opportunities to Farmer Adoption of Soil GHG Mitigation Practices in Dutch Agriculture** *FRONTIERS IN SUSTAINABLE FOOD SYSTEMS*
  Gomes, A., Reidsma, P.
  2021; 5