



## BREN SEMINAR

# HOW TO FEED THE WORLD WITHOUT COSTING THE EARTH



**DAVID WILLIAMS**  
Postdoctoral Researcher  
Bren School

**Monday, October 8, 2018 11:00 – 12:00**  
**Bren Hall 1414**

Watch live at <https://ucsb.zoom.us/j/914919397>

**Dr. Dave Williams is a leader in the field of global agriculture. He specializes in balancing the tradeoff between large-scale agriculture and the huge associated threat to biodiversity. As environmental scientists and consumers, I highly encourage you to come learn more about this extremely relevant global issue.** — Erin Winslow, Bren School PhD Student

**ABSTRACT** Balancing food production with environmental concerns is perhaps the biggest challenge facing society in the 21st century. Eight hundred million people are already malnourished, but growing per capita consumption and a projected population of over 10 billion means we may need to double food production to ensure global food security. However, agriculture already dominates the planet: covering nearly 40% of ice-free land; using over half of all freshwater; and acting as a major source of greenhouse gas emissions and atmospheric and water pollution. It is the greatest driver of land degradation across the world and poses the greatest single threat to other species' survival. Put simply, agriculture is both the most important activity for human well-being and potentially the most environmentally damaging of human actions.

My research combines local land-use strategies with spatially explicit global models to investigate how the decisions about what we eat and how we produce it influence the environment, and to plot potential pathways to sustainable global food security. I will focus on biodiversity and global carbon stocks, but hope that the techniques and ideas I discuss can be translated into other fields to develop a more holistic understanding of food systems and their environmental impacts.

**BIO** David Williams is a post-doctoral researcher in Bren, working with Professor David Tilman on issues surrounding global food security and biodiversity. Before coming to UCSB he completed his PhD in Zoology with Andrew Balmford at the University of Cambridge, in the UK, investigating which land-use strategies best balance food production with biodiversity conservation, and carbon stocks in Yucatán, Mexico. His main research interests are trying to identify practical ways that we can ensure everyone in the world has safe, secure, and adequate food, while conserving other species and maintaining a safe environment for future generations.

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