

## G. David Tilman -- Curriculum Vitae

**ADDRESS** Department of Ecology, Evolution and Behavior (612 -625-5740; tilman@umn.edu)

### EDUCATIONAL HISTORY

University of Michigan 8/67-5/71 B.S. Zoology (High Distinction)  
University of Michigan 9/71-4/76 Ph.D. Zoology (Ecology)

### PROFESSIONAL APPOINTMENTS

Assistant Professor, University of Minnesota	1976-1980
Associate Professor, University of Minnesota	1980-1984
Professor, University of Minnesota	1984-1996
Director, Cedar Creek Natural History Area	1992-present
Distinguished McKnight University Professor	1996-2001
McKnight Presidential Chair in Ecology	2001-present
Regents Professor, University of Minnesota	2002-present

### AWARDS and HONORS

John Simon Guggenheim Fellow	1984-1985
W. S. Cooper Award, Ecological Society of America	1989
Elected member, American Academy of Arts and Science	1995
Pew Scholar in Conservation Biology	1995-1998
MacArthur Award, Ecological Society of America	1997
Elected member, National Academy of Sciences	2002
Botanical Society of America Centennial Award	2006
Princeton Environmental Prize, Princeton University	2006
Designated the World's Most Highly Cited Environmental Scientist of the Decade (1990-2000; 1997-2007) by the Web of Science	2000, 2007
The International Prize for Biology, Japan Soc for the Promotion of Science	2008
Dr. A.H. Heineken Prize for Environmental Sciences	2010

### SELECTED NATIONAL AND INTERNATIONAL SERVICE

Advisory Committee to the Director of the National Science Foundation	1990-1991
Founding Editor, <i>Issues in Ecology</i> , Ecological Society of America	1995-present
Biodiversity and Ecosystems Panel of the President's Committee of Advisors on Science and Technology (PCAST; White House)	1997-1998
Science Advisory Panel for Public Radio International's <i>The World</i>	1997-1998
Member, Board on Environmental Studies & Toxicology, NRC	2002-2005
Member, Search Committee for NSF's Director for Biology	2004-2005
Chair, Environmental Science and Ecology Section, NAS	2004-2007
Advisory Board, Max Plank Institute for Biogeochemistry	2005-present
Chair, NSF's NEON Review Panel	2006
Member, Board of Trustees, Minnesota Nature Conservancy	2006-present
Governor's Minnesota Climate Change Advisory Board	2007
Vice Chair, NRC Panel on Alternative Liquid Transportation Fuels	2007-2008
Member, NRC Committee on America's Energy Future	2007-2008
Founding/Resident Fellow, Institute on the Environment, U of M	2007-present
Board of Trustees, Science for Peace, Fondazione Umberto Veronesi	2009-present
Scientific Advisory Panel, Climate Recovery Partnership, Sierra Club	2009-present
Chair, Class VI: Applied Biological, Agricultural, and Environmental Sciences of the National Academy of Sciences	2009-present
Carbon Offsets Working Group, President's Committee of Advisors on Science and Technology (PCAST; White House)	2010

### INVITED TALKS, SEMINARS AND LEGISLATIVE TESTIMONY

Over 300 talks, including academic seminars, keynote talks, public talks, testimony to legislative committees, to the State Department, to OMB, and at meetings on environmental policy, including one convened and attended by the President of France.

### COMMUNICATIONS WITH THE MEDIA

Notable media interviews since 2000 include: *Popular Science*; *BBC World Service Radio*; *National Post*, Canada; *Baltimore Sun*; *Washington Post*; *Nature News*, *Science Update*; *The Gazette*, Montreal; *St. Paul Pioneer Press*; *StarTribune*; Wisconsin Public Radio; Associated Press; Oregon Public Broadcasting; *Newsweek*; *Environmental Health Perspectives*; MPR; Twin Cities Public Television; Tokyo Broadcasting System International; *Survival Guide* on CNBC; *Science News*; *Discovery TV Channel*; *Quirks & Quarks*, CBC Radio, Toronto; National Public Radio's *All Things Considered*; *Scientific American*; "Hodo Station," TV Asahi, Tokyo; NPR's *Weekend Edition* and *Science Friday*; *Time Magazine*; *Popular Mechanics*; *Science Magazine*; *Nature*

#### **GRADUATE AND POST-DOCTORAL STUDENTS ADVISED**

I have mentored 21 Post-Doctoral researchers, have been the major advisor to 18 students who have received their Ph.D.'s, and am currently advising five Ph.D. candidates.

#### **SELECTED PUBLICATIONS** (from a total of about 250)

- Haddad, N.M., G.M. Crutsinger, K. Gross, J. Haarstad and D. Tilman. 2010. Plant diversity and stability of foodwebs. *Ecology Letters*, in press.
- Searchinger, T., S. Hamburg, J. Melillo, W. Chameides, P. Havlik, D. Kammen, G. Likens, R. Lubowski, M. Obersteiner, M. Oppenheimer, P. Robertson, W. Schlesinger, D. Tilman. 2009. Climate change: Fixing a critical climate accounting error. *Science* 326:527-528.
- Haddad, N., G. Crutsinger, K. Gross, J. Haarstad, J. Knops and D. Tilman. 2009. Plant species loss decreases arthropod diversity and shifts trophic structure. *Ecology Letters* 12:1028-1038
- Tilman, D., R. Socolow, J.A. Foley, J. Hill, E. Larson, L. Lynd, S. Pacala, J. Reilly, T. Searchinger, C. Somerville and R. Williams. 2009. Beneficial Biofuels—The Food, Energy, and Environment Trilemma. *Science* 325:270-271.
- Fargione, J.E., T.R. Cooper, D.J. Flaspohler, J. Hill, C. Lehman, T. McCoy, S. McLeod, E.J. Nelson, K.S. Oberhauser, and D. Tilman. 2009. Bioenergy and Wildlife: Threats and Opportunities for Grassland Conservation. *BioScience* 59:767-777.
- Fornara, D.A., and D. Tilman. 2009. Ecological mechanisms associated with the positive diversity-productivity relationship: evidence from a long-term, N-limited grassland experiment. *Ecology* 90:408-418.
- Hill, J., S. Polasky, E. Nelson, D. Tilman, H. Huo, L. Ludwig, J. Neumann, H. Zheng, and D. Bonta. 2009. Climate change and health costs of air emissions from biofuels and gasoline. *PNAS* 106: 2077-2082.
- Fargione, J., J. Hill, D. Tilman, S. Polasky and P. Hawthorne. 2008. Land clearing and the biofuel carbon debt. *Science* 319: 1235-1238.
- Tilman, D., J. Hill and C. Lehman. 2006. Carbon-negative biofuels from low-input highdiversity grassland biomass. *Science* 314:1598-1600.
- Tilman, D., P. B. Reich and J. M. H. Knops. 2006. Biodiversity and ecosystem stability in a decade-long grassland experiment. *Nature* 441:629-632.
- Hill, J., E. Nelson, D. Tilman, S. Polasky and D. Tiffany. 2006. Environmental, economic, and energetic costs and benefits of biodiesel and ethanol biofuels. *PNAS* 103:11206-11210.
- Tilman, D., S. Polasky and C. Lehman. 2005. Diversity, productivity and temporal stability in the economies of humans and nature. *Journal of Environmental Economics and Management* 49:405-426.
- Tilman, D., K. G. Cassman, P. A. Matson, R. Naylor and S. Polasky. 2002. Agricultural sustainability and intensive production practices. *Nature* 418:671-677.
- Kennedy, T. A., S. Naeem, K. M. Howe, J. M. H. Knops, D. Tilman and P. Reich. 2002. Biodiversity as a barrier to ecological invasion. *Nature* 417:636-638.
- Tilman, D., J. Fargione, B. Wolff, C. D'Antonio, A. Dobson, R. Howarth, D. Schindler, W. Schlesinger, D. Simberloff, D. Swackhamer. 2001. Forecasting Agriculturally Driven Global Environmental Change. *Science* 292:281-284.
- Tilman, D., P. B. Reich, J. Knops, D. Wedin, T. Mielke and C. Lehman. 2001. Diversity and productivity in a long-term grassland experiment. *Science* 294:843-845.
- Tilman, D. 2000. Causes, consequences and ethics of biodiversity. *Nature* 405:208-211.
- Tilman, D. 1999. The ecological consequences of changes in biodiversity: a search for general principles. *Ecology* 80:1455-1474.
- Tilman, D. 1999. Global environmental impacts of agricultural expansion: The need for sustainable and efficient

practices. Proc. Natl. Acad. Sci. USA 96:5995-6000.

Tilman, D., D. Wedin and J. Knops. 1996. Productivity and sustainability influenced by biodiversity in grassland ecosystems. Nature 379:718-720.

Tilman, D. and J.A. Downing. 1994. Biodiversity and stability in grasslands. Nature 367:363-365.