

David Tilman's research focuses on the causes, consequences and conservation of Earth's biodiversity, and on how managed and natural ecosystems can sustainably meet human needs for food, energy and ecosystem services. David Tilman is Regents' Professor and McKnight Presidential Chair in Ecology at the University of Minnesota, and is Director of the University's Cedar Creek Ecosystem Science Reserve. He is an elected member of the American Academy of Arts and Sciences and the National Academy of Sciences, was the Founding Editor of the journal *Ecological Issues* and has served on editorial boards of nine scholarly journals, including *Science*. He serves on the Advisory Board for the Max Plank Institute for Biogeochemistry in Jena, Germany and has been a Member of the Institute for Advanced Study in Princeton and a Fellow of the National Center for Ecological Analysis and Synthesis.

In 2008, David Tilman was awarded the International Prize for Biology from the Japan Society for the Promotion of Science. In 2010, he was awarded the Dr. A.H. Heineken Prize for Environmental Studies. He has also received the Ecological Society of America's Cooper and MacArthur Awards, as well as the Botanical Society of America's Centennial Award, the Princeton Environmental Prize and a J. S. Guggenheim Fellowship. He has written two books, edited three, and published more than 200 papers in the peer-reviewed literature, including more than 30 in *Science*, *Nature* and the *Proceedings of the National Academy of Sciences USA*. The Institute for Scientific Information designated him as the world's most highly cited environmental scientist of the decade 1998-2008.

His multifaceted interests in biodiversity have given his research a broad focus, including (1) the forces that have allowed numerous competing species to evolve, coexist and persist in natural and managed ecosystems, (2) the ways that human actions threaten this biodiversity, (3) the impacts of biodiversity loss on ecosystem functioning and on ecosystem services, and (4) the benefits that the preservation and restoration of biodiversity can provide to society.

David Tilman's current research focuses on the impacts that the changing diets of the global population will have on agriculture and land use and their consequent threat to a sustainable environment. In recent years, he has also produced high-impact analyses of the potential use of biodiversity as a tool for biofuel production and climate stabilization through carbon sequestration. He is known for his critical examinations of the full environmental, energetic, economic and health costs and benefits of grain crops, of current food-based biofuels and of biofuels made from low-input high-diversity prairie species growing on already-degraded lands. Significantly, he showed that that restored native grasslands could provide more energy per hectare than corn grain ethanol or soybean biodiesel, sequester more carbon, and prevent competition between food and biofuel crops for fertile land.

Earlier, his work on the biodiversity and stability of grassland ecosystems challenged the established paradigm and led the discipline to re-examine how diversity affects the productivity, stability and nutrient efficiency of ecosystems. Through a series of papers published in *Science*, *Nature*, and other journals, the long-term biodiversity field experiments and related mathematical theory which led to those discoveries continue to provide a more rigorous foundation for ecosystem management that maximizes ecosystem services to society.

David Tilman has also dedicated much of his career to communicating environmental science to the public, to politicians and to the managers of earth's ecosystems. He believes it is essential that we understand its relevance to society and to sustaining, for the long-term, the quality of human life on earth.