



Dr. David Wolfe

Tales From Underground

What happens to all crops and plant life on Earth as our planet warms? Who are the “winners” and who are the “losers”? That’s the lifelong pursuit of Dr. David Wolfe of Cornell University, a professor of plant and soil ecology in the Department of Horticulture, and a collaborating scientist with the U.S. Climate Change Program.

Wolfe is a leading authority on the effects of climate change and rising atmospheric carbon dioxide on plants, soils, and ecosystems. His recent research documenting earlier spring bloom dates of lilacs, apples, and grapes has received national media attention.

Throughout the Northern Hemisphere, earlier spring arrival of migrating birds, northward expansion of invasive species and unsynchronized emergence of insects could cause disruption of species interactions and could impair functioning ecosystems that provide us clean water, food and other human needs.

In May 2008, Wolfe along with a cadre of premier scientists released a report from the U.S. Climate Change Program titled, *The Effects of Climate Change on Agriculture, Land Resources and Biodiversity in the United States*.

The report offered some startling conclusions. Climate change is already affecting U.S. water resources, agriculture, and biodiversity. Grain crops will have increased risk of crop failures. Higher temperatures will negatively impact livestock. Forests have growing size and frequency of forest fires, insect outbreaks, and tree mortality. Weeds grow more rapidly under elevated atmospheric carbon dioxide, meaning we may have more poison ivy than petunias. Horticulture crops (such as tomatoes, onion and fruit) are more sensitive to warming than grains. Invasion of exotic grasses into arid lands will result from climate change.

But, Wolfe is quick to point out the goal of his research is to provide decision makers, from policy-makers to farmers and gardeners, the information to take advantage of opportunities and minimize risks associated with climate change. We might adapt or “manage the unavoidable,” he says.

Wolfe is also author of the award-winning popular science book on soil ecology, *Tales From the Underground: A Natural History of Subterranean Life*, where he reveals the incredible abundance, diversity, and importance of the natural world beneath our feet. Grab a pinch of dirt from your yard and you will likely be holding close to one billion individual living organisms and perhaps 10,000 distinct species of microbes, most of them not yet named or understood.

“A grand adventure” says The Field Museum of Natural History. “A pioneering and illuminating journey through the underground,” according to Booklist. “Wolfe is consistently engaging...he raises issues and questions that deserve a wide hearing,” from Publishers Weekly.

Wherever he speaks, David Wolfe has a limitless array of “dirty stories” to tell.

PRESENTATIONS:

- On Climate Change
- Climate Change on Our Gardens, Farms and Natural Landscapes
- Gardening in a Changing Climate
- Challenges and Opportunities for Farmers in a Changing Climate
- Climate Change and Global Food Security
- Soils and Life Underground
- Tales from Underground
- Frontiers in Soil Biology and Ecology
- Frontiers in Soil Biology and Soil Health Management
- Darwin as a Pioneer Soil Biologist: His 40-Year Obsession with Earthworms