

## **TRISTRAM O. WEST**

Joint Global Change Research Institute  
Pacific Northwest National Laboratory/  
University of Maryland  
5825 University Research Court  
College Park, Maryland 20740  
Phone: 301-314-6705, Fax: 301-314-6719  
Email: tristram.west@pnnl.gov

### **EDUCATION**

*Ph.D. Agronomy*, Ohio State University, 1999.  
Concentrations: Landscape Ecology and Ecological Modeling  
*M.S. Natural Resources*, Ohio State University, 1996.  
Concentrations: Ecosystem Rehabilitation and Ecological Modeling  
*B.S. Agriculture*, University of Kentucky, 1994.  
Curriculum: Natural Resources Conservation and Management

### **EMPLOYMENT**

*Pacific Northwest Nat. Lab.*, Joint Global Change Research Institute, College Park, Maryland.  
Research Scientist IV, 2010-present.  
*Oak Ridge Nat. Lab.*, Environmental Sciences Division, Oak Ridge, Tennessee.  
Research Scientist III, 2007-2010.  
Research Scientist II, 2003-2006.  
Postdoctoral Research Associate, 1999-2002.  
*The Ohio State University*, School of Natural Resources, Columbus, Ohio.  
Graduate Research Fellow, 1996-1999.  
Graduate Research Associate, 1995-1996.  
Graduate Teaching Associate, 1994-1995.

### **ADJUNCT POSITIONS**

*University of Maryland*, Earth System Science Interdisciplinary Center, College Park, Maryland.  
Visiting Associate Research Scientist, 2011-present.  
*University of Tennessee*, Biosystems Engineering and Soil Science Dept., Knoxville, Tennessee.  
Adjunct Professor, 2004-present.

### **PRIMARY RESEARCH INTERESTS**

- Effects of land management on biogeochemical cycling in terrestrial ecosystems
- Quantitative modeling of the impacts of anthropogenic activities on carbon stocks and fluxes
- Use of remote sensing and geographic information systems to quantify biogeochemical cycling
- Integrated assessment of climate change and bioenergy scenarios
- Environmental effects of policies intended to reduce greenhouse gas emissions

### **AWARDS**

- Oak Ridge National Laboratory, Environmental Sciences Division, Stanley I. Auerbach Award for Excellence in Environmental Science, 2009
- Soil Science Society of America, Best Division S-6 Paper, 1<sup>st</sup> Place, 2008
- Soil Science Society of America, Best Division S-6 Paper, Honorable Mention, 2003
- AAAS Environmental Fellowship, Congressional Science and Engineering Fellowship, 2002
- US Department of Defense Fellowship, 1996-1999
- The Ohio State University, Mapping and GIS Laboratory Fellowship, 1996-1999

## **COMPETITIVE GRANTS AWARDED**

- NASA OCO Applications Workshop. Funded by NASA, 2014. PI: A. Busalacchi.
- Carbon Monitoring of Agricultural Lands: Developing a Globally Consistent Estimate of Carbon Stocks and Fluxes. Funded by NASA, 2013-2016. PI: T.O. West.
- Estimating Global Inventory-based Net Carbon Exchange from Agricultural Lands for Use in the NASA Flux Pilot Study. Funded by NASA, 2012-2013. PI: T.O. West.
- Developing Spatially-explicit Future Realizations of Land Use and Land Cover Change for the Platform for Regional Integrated Modeling and Analysis (PRIMA). Funded by Department of Energy, Laboratory Directed Research and Development, 2012-2013. PI: T.O. West.
- Modeling and Mapping Land Management and Net Carbon Emissions: Decision Support for Biofuels and Carbon Management on US Agricultural Lands. Funded by NASA, 2008-2011. PI: T.O. West.
- Resolving Net CO<sub>2</sub> Exchange in the Mid-Continent Region of North America by Comparing and Reconciling Results from Inverse Modeling and Inventory-Based Approaches. Funded by NASA, 2008-2011. PI: S.M. Ogle.
- Development of a Framework and Modeling Tool for Spatially-Explicit Full Carbon and Greenhouse Gas Accounting at the Regional to National Scale: Estimating Net C-equivalent Flux from U.S. Agriculture. Funded by NASA, 2005-2008. PI: T.O. West.
- Lateral and Temporal Displacement of Terrestrial Carbon by Humans. Funded by NOAA, 2005-2007. PI: G. Marland.

## **STUDENT SUPERVISION, INSTRUCTION, AND GRADUATE COMMITTEES**

- 2003: Brooke Ilene Chichakly (undergraduate), Allen McBride (undergraduate),  
Xiaojuan Yang (Ph.D. candidate, Univ. of Illinois, Advisor: Atul Jain)
- 2005: Adam Roddy (undergraduate; co-supervised with Stan Wullschleger), Maithilee Kunda  
(undergraduate; co-supervised with Gregg Marland)
- 2006: Maithilee Kunda (post-bachelor), Aarthy Sabesan (post-masters; co-supervised with  
Budhendra Bhaduri)
- 2006: Instructor for fall semester course at University of Tennessee:  
ESS 593, Special Problems in Plant and Soil Sciences
- 2005-2008: Chad Hellwinkel (Ph.D. candidate, co-advised with Dr. Daniel De La Torre Ugarte at  
University of Tennessee)
- 2008-2010: Varaprasad Bandaru (post-doctoral student at Oak Ridge National Laboratory)
- 2011: Judge for AGU 2011 Fall Meeting, Outstanding Student Paper Award (OSPA)
- 2011-2012: Wendy Bruns (M.S. candidate, Univ. of Tenn., Advisor: Neal Eash)
- 2012-2013: Julie Wolf (post-doctoral student at Earth System Science Interdisciplinary Center)
- 2013-present: Julie Wolf (post-doctoral student at Joint Global Change Research Institute)
- 2013-present: Fang Zhao (Ph.D. candidate, Univ. of Maryland, Advisor: Ning Zeng)

## **PROFESSIONAL SERVICE AND ACTIVITIES**

### **Science Advisory Boards and Working Groups**

- NASA Carbon Monitoring System Phase 2 Team, 2012-present.
- Team member of the Bio-Based Energy Analysis Group, University of Tennessee, 2005-present.
- NASA Terrestrial Ecology Working Group, 2010-2013.
- National Research Council of the National Academies, Committee Workshop on Needs and Research Requirements for Land-Change Modeling, 2012.
- USDA Croplands/Grazing Lands Working Group for Quantifying Greenhouse Gas Emissions from Forest and Agricultural Sectors, 2011-present.

- Member of the Scientific and Technical Advisory Panel for the United Nations, Global Environment Facility's Carbon Benefit Project, 2012-2013.
- Special Government Employee (SGE) Appointment to the US Environmental Protection Agency, Science Advisory Board for Biogenic Carbon Emissions, 2011-2013.
- Working Group on the Programmatic Environmental Impact Statement for the Biomass Crop Assistance Program, US Farm Service Agency, 2009-2010.
- Member of the North American Carbon Program, Mid-Continent Intensive Campaign Task Force, 2005-2008.
- GIS Working Group Team Leader, US Department of Energy Biomass Program, 2006-2008.
- National Research Council of the National Academies. Workshop on Direct and Indirect Human Contributions to Terrestrial Greenhouse Gas Fluxes, 2003.

#### **Reviewer – Grants/Research Programs**

- DOE Office of Science - 2005, 2006, 2011
- DOE EPSCOR Program- 2003
- Energy Biosciences Institute - 2010
- NASA - 2005, 2009, 2011
- NSF - 2013
- USDA CSREES - 2009

#### **Reviewer – Journals**

Agriculture, Ecosystems, and Environment; Agronomy Journal; Biogeosciences; Biogeochemistry; Biology and Fertility of Soils; BioScience; Canadian Journal of Soil Science; Carbon Management; Catena; Climatic Change; Ecological Applications; Ecological Modelling; Ecosystems; Environment, Development and Sustainability; Environmental Management; Environmental Pollution; Environmental Research Letters; Environmental Science and Technology; Geochimica et Cosmochimica Acta; Geophysical Research Letters; Global Change Biology; Global Change Biology Bioenergy; Greenhouse Gas Measurement and Management; Journal of Arid Environments; Journal of Environmental Quality; Journal of Geophysical Research-Atmospheres ; Journal of Geophysical Research-Biogeosciences; Journal of Soil and Water Conservation; Mitigation and Adaptation Strategies for Global Change; Nature; Plant and Soil; Remote Sensing; Soil Biology and Biochemistry; Soil Science Society of America Journal; Soil and Tillage Research; Tellus-B; Water, Air and Soil Pollution;

#### **Reviewer – Reports and Book Chapters**

- IPCC Working Group 2 Fifth Assessment Report, Expert Reviewer, 2013
- USDA Managing Agricultural Greenhouse Gasses (GraceNET special issue; Elsevier), 2011
- AGU Geophysical Monograph Series, Carbon Sequestration and Its Role in the Global Carbon Cycle, 2010
- Carbon Cycle Science Steering Group Review of the U.S. Carbon Cycle Science Plan, 2010.
- EPA Inventory of U.S. Greenhouse Gas Emissions and Sinks, 2006
- 2006 IPCC Guidelines for National Greenhouse Gas Inventories, 2006
- US State of the Carbon Cycle Report, 2006.
- EPA Greenhouse Gas Mitigation Potential in U.S. Forestry and Agriculture, 2005
- USDA ERS Economics of Sequestering Carbon in the US Agricultural Sector, 2002
- IPCC Special Report on Land Use, Land-Use Change and Forestry, 2000

#### **Editorial Boards**

Associate Editor, Soil Science Society of America Journal, Division S-6, Soil and Water Management and Conservation, 2007-2013.

### Organized Symposia and Meetings

- Duren, R., E.L. Cox, **T.O. West**, A. Negri. 2014. NASA Orbiting Carbon Observatory (OCO) Applications Workshop. College Park, Maryland: 3-4 April.
- 2013 Planning Committee. 2013. The North American Carbon Program – 4<sup>th</sup> All Investigators Meeting. Theme 5: Estimating Success and Side Effects of Carbon Management. Albuquerque, New Mexico: 4-8 February. [[http://www.nacarbon.org/meeting\\_2013/committee.htm?](http://www.nacarbon.org/meeting_2013/committee.htm?)]
- West, T.O.** 2009. A-10 Session: Estimating Current and Future Biomass Feedstocks—Integrative Approaches Using Field Data, Remote Sensing, Economics, and Land-Use Change Modeling. *Session Chair*. ASA/SSSA/CSA Meeting, Pittsburgh, Pennsylvania: 1-5 November.
- Davis, K.J., A.S. Denning, S.M. Ogle, **T.O. West**. 2005. B25 Session: Regional Carbon Cycle Studies: Progress and Methods. *Session Co-Chair*. American Geophysical Union Fall Meeting, San Francisco, California: 5-9 December.

### PROFESSIONAL AFFILIATIONS

- American Geophysical Union
- American Society of Agronomy
- American Society for Photogrammetry and Remote Sensing
- Ecological Society of America
- Soil Science Society of America

### RESEARCH HIGHLIGHTS AND PRESS RELEASES

- Carbon hitches a ride from field to market: Agriculture's mobile nature makes predicting regional greenhouse gas impacts more complex, August 2011: <http://www.sciencedaily.com/releases/2011/08/110803151228.htm>
- Use of satellite remote sensing and modeling to estimate soil carbon change at regional and continental extents, March 2011: <http://www.pnl.gov/science/highlights/highlight.asp?id=920>
- Spatially-Explicit, Agricultural Carbon Accounting Tool, June 2010: [http://www.ornl.gov/info/press\\_releases/get\\_press\\_release.cfm?ReleaseNumber=mr20100602-00](http://www.ornl.gov/info/press_releases/get_press_release.cfm?ReleaseNumber=mr20100602-00)
- Highlighted as Emerging Research Front from Thomson-Reuters ScienceWatch, August 2009: <http://sciencewatch.com/dr/erf/2009/09augerf/09augerfWest/>
- Fossil-based CO<sub>2</sub> Emissions from Cropland Production are Linked to Policy, Weather, and Crop Prices, May 2009: CSA News 54(05): 11-12.
- New Tool Gets Handle on Cropland CO<sub>2</sub> Emissions, February 2009: [http://www.ornl.gov/info/press\\_releases/get\\_press\\_release.cfm?ReleaseNumber=mr20090209-00](http://www.ornl.gov/info/press_releases/get_press_release.cfm?ReleaseNumber=mr20090209-00)

### ARCHIVED DATA SETS

- Crop carbon uptake (NPP) and removal (harvest) for US croplands: <http://cdiac.ornl.gov/carbonmanagement/cropcarbon/>
- Crop carbon consumption and emissions by humans: <http://cdiac.ornl.gov/carbonmanagement/humanemissions/>
- Crop carbon consumption and emissions by livestock: <http://cdiac.ornl.gov/carbonmanagement/livestockemissions/>
- Estimated changes in soil carbon for the US: <http://cdiac.ornl.gov/carbonmanagement/soilcarbonchange/>
- Energy use and fossil fuel emissions from cropland production in the US: <http://cdiac.ornl.gov/carbonmanagement/cropfossilemissions/>

## PUBLICATIONS

ResearcherID: <http://www.researcherid.com/rid/C-5699-2013>

## Peer-reviewed publications

- Li, Z., S. Liu, Z. Tan, N. Bliss, C. Young, **T.O. West**, and S.M. Ogle. 2014. Comparing cropland net primary production estimates from inventory, satellite based model, and process-based model in the Midwest of the United States. *Ecological Modeling* 277: 1-12.
- Kraucunas, I., L. Clarke, J. Dirks, J. Hathaway, M. Hegazi, K. Hibbard, M. Huang, C. Jin, M. Kintner-Meyer, K. Kleese Van Dam, R. Leung, H-Y. Li, R. Moss, M. Peterson, J. Rice, M. Scott, A. Thomson, N. Voisin, and **T. West**. 2014. Investigating the nexus of climate, energy, water, and land at decision-relevant scales: the Platform for Regional Integrated Modeling and Analysis (PRIMA). *Climatic Change DOI* 10.1007/s10584-014-1064-9.
- Thomson, A.M., G.P. Kyle, X. Zhang, V. Bandaru, **T.O. West**, M.A. Wise, R.C. Izaurralde, and K.V. Calvin. 2014. The contribution of future agricultural trends in the US Midwest to global climate change mitigation. *Global Environmental Change* 24: 143-154.
- Zhang, X., R. Shajpal, D.M. Manowitz, K. Zhao, S. LeDuc, M. Xu, W. Xiong, A. Zhang, R.C. Izaurralde, A.M. Thomson, **T.O. West**, and W.M. Post. 2014. Multi-scale Geospatial Agroecosystem Modeling: A Case Study on the Influence of Soil Data Resolution on Carbon Budget Estimates. *Science of the Total Environment* 479-480: 138-150.
- West, T.O.**, M.E. Brown, R.M. Duren, S.M. Ogle, and R.H. Moss. 2013. Definition, capabilities, and components of a terrestrial carbon monitoring system. *Carbon Management* 4: 413-422.
- Kang, S., W.M. Post, J.A. Nichols, D. Wang, **T.O. West**, V. Bandaru, and R.C. Izaurralde. 2013. Marginal lands: concept, assessment and management. *Journal of Agricultural Science* 5: 129-139.
- Bandaru, V., **T.O. West**, D. Riccuito, and R. C. Izaurralde. 2013. Estimating crop net primary production using national inventory data and MODIS-derived parameters. *ISPRS Journal of Photogrammetry and Remote Sensing* 80: 61-71.
- Schuh, A.E., T. Lauvaux, **T.O. West**, A.S. Denning, K.J. Davis, N. Miles, S. Richardson, M. Uliasz, E. Lokupitiya, D. Cooley, A. Andrews, and S. Ogle. 2013. Evaluating atmospheric CO<sub>2</sub> inversions at multiple scales over a highly-inventoried agricultural landscape. *Global Change Biology* 19: 1424-1439.
- Kang, S., W. Post, D. Wang, J. Nichols, V. Bandaru, and **T.O. West**. 2013. Hierarchical marginal land assessment for land use planning. *Land Use Policy* 30: 106-113.
- Post, W.M., R.C. Izaurralde, **T.O. West**, M.A. Liebig, and A.W. King. 2012. Management opportunities to enhance terrestrial CO<sub>2</sub> sinks. *Frontiers in Ecology and the Environment* 10:554-561.
- King, A.W., D.J. Hayes, D.N. Huntzinger, **T.O. West**, and W.M. Post. 2012. North America carbon dioxide sources and sinks: magnitude, attribution, and uncertainty. *Frontiers in Ecology and the Environment* 10:512-519.
- Toliver, D.K., J.A. Larson, R.K. Roberts, B.C. English, D.G. De La Torre Ugarte, and **T.O. West** 2012. Effects of no-till on yields as influenced by crop and environmental factors. *Agronomy Journal* 104: 530-541.
- Miles, N.L., S.J. Richardson, K.J. Davis, T. Lauvaux, A.E. Andrews, **T.O. West**, V. Bandaru, E.R. Crosson. 2012. Large amplitude spatial and temporal gradients in atmospheric boundary layer CO<sub>2</sub> mole fractions detected with a tower-based network in the U.S. Upper Midwest. *Journal of Geophysical Research Biogeosciences* 117, G01019, doi:10.1029/2011JG001781.
- Huntzinger, D.N., W.M. Post, Y. Wei, A.M. Michalak, **T.O. West**, A.R. Jacobson, I.T. Baker, J.M. Chen, K.J. Davis, D.J. Hayes, F.M. Hoffman, A.K. Jain, S. Liu, A.D. McGuire, R.P. Nelson, B. Poulter, B.M. Raczka, H.Q. Tian, P. Thornton, E. Tomelleri, N. Viovy, J. Xiao, N. Zeng, M. Zhao, and R. Cook. 2012. North American carbon project (NACP) regional interim synthesis: terrestrial biospheric model intercomparison. *Ecological Modeling* 232: 144-157.

- Hayes, D.J., D.P. Turner, G. Stinson, A.D. McGuire, Y. Wei, **T.O. West**, L.S. Heath, B. deJong, B.G. McConkey, R.A. Birdsey, W.A. Kurz, A.R. Jacobson, D.N. Huntzinger, Y. Pan, W.M. Post, and R.B. Cook. 2011. Reconciling estimates of the contemporary North American carbon balance among terrestrial biosphere models, atmospheric inversions and a new approach for estimating net ecosystem exchange from inventory-based data. *Global Change Biology* 18: 1282-1299.
- West, T.O.** 2011. Monitoring informs management. *Nature Climate Change* 1:399-400.
- West, T.O.**, V. Bandaru, C.C. Brandt, A.E. Schuh, and S.M. Ogle. 2011. Regional uptake and release of crop carbon in the United States. *Biogeosciences* 8: 2037-2046.
- Garten, C.T., D.J. Brice, H.F. Castro, R.L. Graham, M.A. Mayes, J.R. Phillips, W.M. Post, C.W. Schadt, S.D. Wullschleger, D.D. Tyler, P.M. Jardine, J.D. Jastrow, R. Matamala, R.M. Miller, K.K. Moran, T.W. Vugteveen, R.C. Izaurralde, A.M. Thomson, **T.O. West**, J.E. Amonette, V.L. Bailey, F.B. Metting, and J.L. Smith. 2011. Response of “Alamo” switchgrass tissue chemistry and biomass to nitrogen fertilization in West Tennessee, USA. *Agriculture, Ecosystems and Environment* 140: 289-297.
- Brown, D.J., E.R. Hunt, R.C. Izaurralde, K.H. Paustian, C.W. Rice, B.L. Schumaker, and **T.O. West**. 2010. Soil organic carbon change monitored over large areas. *EOS, Transactions, American Geophysical Union* 91: 441-442.
- Larson, J.A., B.C. English, D.G. De La Torre Ugarte, R.J. Menard, C.M. Hellwinckel, and **T.O. West**. 2010. Economic and environmental impacts of the corn grain ethanol industry on the United States agricultural sector. *Journal of Soil and Water Conservation* 65(5): 264-279.
- West, T.O.** 2010. Integrative approaches for estimating current and future feedstock availability. *GCB Bioenergy* 2: 215-216.
- Zhang, X., R.C. Izaurralde, D. Manowitz, **T.O. West**, W.M. Post, A.M. Thomson, V. Bandaru, J. Nichols, J.R. Williams. 2010. An integrative modeling framework to evaluate the productivity and sustainability of biofuel crop production systems. *GCB Bioenergy* 2: 258-277.
- Hellwinckel, C.M., **T.O. West**, D.G. De La Torre Ugarte, R.D. Perlack. 2010. Evaluating possible cap and trade legislation on cellulosic feedstock availability. *GCB Bioenergy* 2: 278-287.
- West, T.O.**, C.C. Brandt, L.M. Baskaran, C.M. Hellwinckel, R. Mueller, C.J. Bernacchi, V. Bandaru, B. Yang, B.S. Wilson, G. Marland, R.G. Nelson, D.G. De La Torre Ugarte, and W.M. Post. 2010. Cropland carbon fluxes in the United States: Increasing geospatial resolution of inventory-based carbon accounting. *Ecological Applications* 20: 1074-1086.
- Garten, C.T., J.L. Smith, D.D. Tyler, J.E. Amonette, V.L. Bailey, D.J. Brice, H.F. Castro, R.L. Graham, C.A. Gunderson, R.C. Izaurralde, P.M. Jardine, J.D. Jastrow, M.K. Kerley, R. Matamala, M.A. Mayes, F.B. Metting, R.M. Miller, K.K. Moran, W.M. Post III, R.D. Sands, C.W. Schadt, J.R. Phillips, A.M. Thomson, T. Vugteveen, **T.O. West**, and S.D. Wullschleger. 2010. Intra-annual changes in biomass, carbon, and nitrogen dynamics at 4-year old switchgrass field trials in west Tennessee, USA. *Agriculture, Ecosystems and Environment* 136: 177-184.
- West, T.O.**, N. Singh, G. Marland, B.L. Bhaduri, A. Roddy. 2009. The human carbon budget: An estimate of the spatial distribution of metabolic carbon consumption and release in the United States. *Biogeochemistry* 94: 29-41.
- Nelson, R.G., C.M. Hellwinckel, C.C. Brandt, **T.O. West**, D.G. De La Torre Ugarte, and G. Marland. 2009. Energy use and carbon dioxide emissions from cropland production in the United States, 1990-2004. *Journal of Environmental Quality* 38: 418-425.
- West, T.O.**, C.C. Brandt, B.S. Wilson, C.M. Hellwinckel, D.D. Tyler, G. Marland, D.G. De La Torre Ugarte, J.A. Larson, R. Nelson. 2008. Estimating regional changes in soil carbon with high spatial resolution. *Soil Science Society of America Journal* 72: 285-294.
- West, T.O.** and J. Six. 2007. Considering the influence of sequestration duration and carbon saturation on estimates of soil carbon capacity. *Climatic Change* 80: 25-41.
- Jain, A.K., **T.O. West**, X. Yang, and W.M. Post. 2005. Assessing the impact of changes in climate and CO<sub>2</sub> on potential carbon sequestration in agricultural soils. *Geophysical Research Letters* 32, L19711, doi:10.1029/2005GL023922.

- West, T.O.** and A.C. McBride. 2005. The contribution of agricultural lime to carbon dioxide emissions in the United States: dissolution, transport, and net emissions. *Agriculture, Ecosystems and Environment* 108:145-154.
- Post, W.M., R.C. Izaurralde, J.D. Jastrow, B.A. McCarl, J.E. Amonette, V.L. Bailey, P.M. Jardine, **T.O. West**, and J. Zhou. 2004. Enhancement of carbon sequestration in U.S. soils. *Bioscience* 54: 895-908.
- Marland, G., C.T. Garten, W.M. Post, and **T.O. West**. 2004. Studies on enhancing carbon sequestration in soils. *Energy* 29:1643-1650.
- West, T.O.**, G. Marland, A.W. King, W.M. Post, A.K. Jain, and K. Andrasko. 2004. Carbon management response curves: estimates of temporal soil carbon dynamics. *Environmental Management* 33: 507-518.
- West, T.O.** and N. Peña. 2003. Determining thresholds for mandatory reporting of greenhouse gas emissions. *Environmental Science and Technology* 37:1057-1060.
- Marland, G., **T.O. West**, B. Schlamadinger, L. Canella. 2003. Managing soil organic carbon in agriculture: the net effect on greenhouse gas emissions. *Tellus B* 55: 613-622.
- West, T.O.** and G. Marland. 2003. Net carbon flux from agriculture: Carbon emissions, carbon sequestration, crop yield, and land-use change. *Biogeochemistry* 6:73-83.
- West, T.O.** and W.M. Post. 2002. Soil organic carbon sequestration rates by tillage and crop rotation: A global analysis. *Soil Science Society of America Journal* 66:1930-1946.
- West, T.O.** and G. Marland. 2002. Net carbon flux from agricultural ecosystems: Methodology for full carbon cycle analyses. *Environmental Pollution* 116:437-442.
- West, T.O.** and G. Marland. 2002. A synthesis of carbon sequestration, carbon emissions, and net carbon flux in agriculture: Comparing tillage practices in the United States. *Agriculture, Ecosystems, and Environment* 91:217-232.
- West, T.O.** and M.K. Wali. 2002. Modeling regional carbon dynamics and soil erosion in disturbed and rehabilitated ecosystems as affected by land use and climate. *Water, Air and Soil Pollution* 138:141-164.
- West, T.O.** and M.K. Wali. 1999. A model for estimating sediment yield from surface-mined lands. *International Journal for Surface Mining, Reclamation and Environment* 13: 103-109.

### Reports, Book Chapters, Special Issues

- R.C. Izaurralde, W.M. Post, and **T.O. West**. 2012. Managing carbon: ecological limits and constraints. *Land Use and the Carbon Cycle: Science and Applications in Coupled Natural-Human Systems*. Cambridge University Press.
- Council for Agricultural Science and Technology. 2011. Carbon sequestration and greenhouse fluxes in agriculture: challenges and opportunities. Council for Agricultural Science and Technology, Ames, Iowa.
- West, T.O.** (guest editor). 2010. Integrative approaches for estimating current and future feedstock availability. *Global Change Biology Bioenergy* 2.
- English, B. C., D. G. De La Torre Ugarte, C. M. Hellwinckel, K. L. Jensen, R. J. Menard, **T. O. West**, and C. D. Clark. 2010. Implications of Climate Change and Energy Legislation to the Agricultural Sector. Report to the 25x'25 Group, Energy Foundation. November 2010.
- English, B.C., D.G. De La Torre Ugarte, C.M. Hellwinckel, K.L. Jensen, R.J. Menard, **T.O. West**, and C.D. Clark. 2010. Implications of Energy and Carbon Policies for the Agricultural and Forestry Sectors. Publication of the 25x'25 Working Group. Washington DC.
- English, B.C., K.L. Jensen, R.J. Menard, C.M. Hellwinckel, **T.O. West**, and C.D. Clark. 2010. Implications of Energy and Carbon Policies for the Agricultural and Forestry Sectors: State level impacts. Report to 25x'25 Work Group. Washington DC.

- De La Torre Ugarte, D., B.C. English, C. Hellwinckel, **T.O. West**, K.L. Jensen, C.D. Clark, R.J. Menard. 2009. Analysis of the Implications of Climate Change and Energy Legislation to the Agricultural Sector. Publication of the 25x'25 Working Group. Washington, DC.
- Post W.M., J.E. Amonette, R. Birdsey, C.T. Garten Jr., R.C. Izaurralde, P.M. Jardine, J. Jastrow, R. Lal, G. Marland, B.A. McCarl, A.M. Thomson, **T.O. West**, S.D. Wullschleger, and F.B. Metting. 2009. Terrestrial carbon sequestration – Science for enhancement and implementation. In B.J. McPherson and E.T. Sundquist, editors. Carbon Sequestration and Its Role in the Global Carbon Cycle. American Geophysical Union, Geophysical Monograph Series 183, pp. 73-88.
- McKinsey and Company. 2008. Pathways to a low-carbon economy – Version 2 of the Global Greenhouse Gas Abatement Cost Curve. McKinsey & Company, Washington, D.C.
- Gunderson, C.A., E.B. Davis, H.I. Jager, **T.O. West**, R.D. Perlack, C.C. Brandt, S.D. Wullschleger, L.M. Baskaran, M.E. Downing, E.G. Wilkerson. 2008. Exploring potential U.S. switchgrass production for cellulosic ethanol. ORNL/TM-2007/183. Environmental Sciences Division, Oak Ridge National Laboratory, Oak Ridge, Tennessee.
- Ogle, S., K. Davis, A. Andrews, K. Gurney, **T.O. West**, R.B. Cooke, T. Parkin, J. Morisette, S. Verma, and S. Wofsy. 2006. Science plan: Mid-Continent Intensive Campaign of the North American Carbon Program. Available at [www.nacarbon.org/nacp/documents/NACP\\_MCI\\_SciPlan\\_8-06.pdf](http://www.nacarbon.org/nacp/documents/NACP_MCI_SciPlan_8-06.pdf). NACP, Greenbelt, MD.
- Marland G., **T.O. West**, and J. Fenderson. 2001. Carbon emitted, carbon saved. CDIAC Communications Newsletter. Issue No. 28. Carbon Dioxide Information Analysis Center, Oak Ridge National Laboratory, Oak Ridge, Tennessee.

## PRESENTATIONS

- West, T.O.** 2013. Biogenic carbon flux from global croplands. NASA CMS First User Engagement Meeting, Resources for the Future, Washington DC: 5-6 December.
- West, T.O.**, J. Wolf, Y. Le Page, A. Thomson, P. Kyle, X. Zhang, B. Bond-Lamberty, K. Calvin, M. Imhoff. 2013. Biogenic carbon flux from global croplands. NASA Carbon Monitoring System Phase 2 Science Team Meeting, NASA Jet Propulsion Laboratory, Pasadena, CA: 5-7 November.
- West, T.O.**, V. Bandaru, P. Kyle, X. Zhang, B. Bond-Lamberty, and A. Thomson. 2013. Downscaling economic projections of land cover and land use change for carbon management and Earth system modeling: a multi-scalar approach. North American Carbon Program, All-Investigators Meeting, Albuquerque, New Mexico: 4-7 February.
- West, T.O.**, V. Bandaru, J. Wolf, G.J. Collatz, C. Neigh, and M. Imhoff. 2012. Estimating global inventory-based net carbon exchange from agricultural lands for use in the NASA flux pilot study. NASA Carbon Monitoring System Science Team Meeting, Goddard Space Flight Center, Greenbelt, Maryland: 6-9 November.
- West, T.O.** 2012. Towards a carbon monitoring system – estimating soil organic carbon change using remote sensing and modeling. United Nations Environment Programme, Scientific and Technical Advisory Panel to the Global Environment Facility. Nairobi, Kenya: 10-12, September 2012.
- West T.O.**, V. Bandaru, C.M. Hellwinckel, C.C. Brandt. 2011. Mapping agricultural land use change in the US: Biofuel scenarios from 2009-2030. AGU Fall Meeting, San Francisco, California: 5-9 December.
- J.M. Chen, F. Deng, F. Zhang, J. Fung, Y. Pan, R. Birdsey, **T.O. West**, L. He, and K. McCullough. 2011. North America terrestrial carbon sink estimation using top-down and bottom-up methods. AGU Fall Meeting, San Francisco, California: 5-9 December.
- A.E. Schuh, T. Lauvaux, **T.O. West**, M. Uliasz, K.L. Mueller, K.J. Davis, S.M. Ogle. 2011. Evaluating atmospheric CO<sub>2</sub> inversions at multiple scales over a highly-inventoried agricultural landscape. AGU Fall Meeting, San Francisco, California: 5-9 December.
- D.J. Hayes, D.P. Turner, G. Stinson, A.D. McGuire, Y. Wei, **T.O. West**, L.S. Heath, B.H. De Jong, B.G. McConkey, R. Birdsey, W.A. Kurz, A.R. Jacobson, D.N. Huntzinger, Y. Pan, W.M. Post,

- and R.B. Cook. 2011. Reconciling estimates of the contemporary North American carbon balance among an inventory-based approach, terrestrial biosphere models, and atmospheric inversions. AGU Fall Meeting, San Francisco, California: 5-9 December.
- Bandaru, V., **T.O. West**, D.M. Ricciuto. 2011. Estimating cropland NPP using national crop inventory and MODIS derived crop specific parameters. AGU Fall Meeting, San Francisco, California: 5-9 December.
- West, T.O.**, V. Bandaru, C.M. Hellwinckel, C.C. Brandt. 2011. Mapping agricultural land use change in the US: biofuel scenarios from 2000-2030. NASA Carbon Cycle and Ecosystems Joint Science Workshop. Hilton Alexandria Mark Center, Alexandria, Virginia: 3-5 October.
- West, T.O.** 2011. Invited panelist for Global Change Impact and Vulnerability session. NASA Carbon Cycle and Terrestrial Ecosystems Joint Science Workshop. Hilton Alexandria Mark Center, Alexandria, Virginia: 3-5 October.
- West, T.O.**, V. Bandaru, C.C. Brandt, S.M. Ogle, and A. Schuh. 2011. Geospatial uptake and release of crop carbon in the United States. 3<sup>rd</sup> Annual NACP All-Investigators Meeting, New Orleans, LA: 31 January – 4 February.
- Bandaru, V., **T.O. West**, R.C. Izaurralde, W.M. Post, D. Ricciuto, E.R. Hunt. 2011. Improving estimates of crop net primary production using remote sensing, national inventory data, and crop growth model algorithms. 3<sup>rd</sup> Annual NACP All-Investigators Meeting, New Orleans, LA: 31 January – 4 February.
- Ogle, S.M., **T.O. West**, A. Schuh, S. Liu, Z. Li, R.C. Izaurralde, V. Bandaru, D. Cooley, and MCI Science Team. 2011. Comparing modeled cropland carbon dynamics from multiple contributions to the mid-continent intensive campaign. 3<sup>rd</sup> Annual NACP All-Investigators Meeting, New Orleans, LA: 31 January – 4 February.
- T. Lauvaux, A. Schuh, A.E. Andrews, A. Jacobson, M. Uliasz, **T.O. West**, S. Richardson, N. Miles, D. Cooley, K.R. Gurney, L.I. Diaz, K.J. Davis. 2011. Network design for high resolution inversions: How many towers are needed to constrain a regional carbon balance? 3<sup>rd</sup> Annual NACP All-Investigators Meeting, New Orleans, LA: 31 January – 4 February.
- Ogle, S.M., **T.O. West**, A. Schuh, D. Cooley, K.R. Gurney, L.S. Heath, J. Smith, S. Liu, Z. Li, R.C. Izaurralde, V. Bandaru, F.J. Breidt, K.J. Davis, and MCI Science Team. 2011. Inventory of CO<sub>2</sub> flux for the mid-continent region of the United States. 3<sup>rd</sup> Annual NACP All-Investigators Meeting, New Orleans, LA: 31 January – 4 February.
- Schuh, A., T. Lauvaux, S.M. Ogle, K.J. Davis, S. Denning, D. Cooley, F.J. Breidt, N. Miles, S. Richardson, L.I. Diaz, M. Uliasz, A. Jacobson, K. Mueller, S. Gourdji, A.E. Andrews, and **T.O. West**. 2011. Contrasting atmospheric CO<sub>2</sub> inversion results at a regional scale over the highly-inventoried area of the Mid-Continental Intensive. 3<sup>rd</sup> Annual NACP All-Investigators Meeting, New Orleans, LA: 31 January – 4 February.
- McGuire, A.D., D.J. Hayes, G. Stinson, D. Turner, Y. Wei, L.S. Heath, W. Kurz, **T.O. West**, B. McConkey, B. de Jong, D.N. Huntzinger, W.M. Post, R.B. Cook, NACP Regional Synthesis Participants. 2011. Towards better-constrained assessments of the carbon balance of North America in the 21<sup>st</sup> Century: a comparison of recent model and inventory-based estimates. 3<sup>rd</sup> Annual NACP All-Investigators Meeting, New Orleans, LA: 31 January – 4 February.
- West, T.O.** 2011. Cropland Carbon Inventory. North American Carbon Program, Mid-Continent Intensive Campaign Workshop. Colorado State University, Fort Collins, Colorado: 11-13 January.
- Thomson, A.M., R.C. Izaurralde, K. Calvin, X. Zhang, M. Wise, **T.O. West**. 2010. Integrating a detailed agricultural model in a global economic framework: new methods for assessment of climate mitigation and adaptation opportunities. 2010 Fall AGU Meeting, San Francisco, California: 13-17 December.
- Hellwinckel, C.M., **T.O. West**, D. De La Torre Ugarte, R. Perlack. 2010. Modeling joint climate and bioenergy policies: challenges of integrating economic and environmental data. 2010 Fall AGU Meeting, San Francisco, California: 13-17 December.

- Schuh, A.E., S.M. Ogle, K.J. Davis, A. Denning, T. Lauvaux, N.L. Miles, S. Richardson, A.R. Jacobson, A.E. Andrews, M. Uliasz, L.I. Diaz, **T.O. West**, D.S. Cooley. 2010. Top-down bottom-up comparisons of the mid-continent intensive (MCI) region. 2010 Fall AGU Meeting, San Francisco, California: 13-17 December.
- Davis, K.J., A.E. Andrews, M. Cambaliza, A. Denning, K.R. Gurney, T. Lauvaux, N.L. Miles, S.M. Ogle, A. Possolo, S. Richardson, A.E. Schuh, P.B. Shepson, C. Sweeney, J.C. Turnbull, **T.O. West**, and J.R. Whetstone. 2010. Greenhouse gas emissions derived from regional measurement networks and atmospheric inversions: results from the MCI and INFLUX experiments. 2010 Fall AGU Meeting, San Francisco, California: 13-17 December.
- West, T.O.** 2010. Improving estimates of current and future carbon stocks and fluxes on US agricultural lands using satellite remote sensing. University of Maryland, Department of Geography, College Park, Maryland: 21 October.
- Ogle, S., T.O. West, A. Schuh, T. Lauvaux, J. Breidt, D. Cooley, N. Miles, S. Richardson, L. Diaz, A. Andrews, G. Petron, C. Izaurrealde, S. Liu, Z. Li, L. Heath, J. Smith, E. Lokupitiya, K. Gurney, S. Denning, K. Davis. 2010. MCI Regional Intensive. NACP 3<sup>rd</sup> Interim Synthesis Workshop. CIRES Conference Center, University of Colorado, Boulder, Colorado: 25-27 August.
- Bandaru, V., X. Zhang, S. Kang, C. Izaurrealde, W.M. Post, **T.O. West**. 2010. Defining and Locating Marginal Lands: Biophysical Metrics. Great Lakes Bioenergy Research Center Annual Meeting, Century Center, South Bend, Indiana: 17-19 May.
- West, T.O.** 2010. Estimating Soil Carbon Sequestration Potential: Regional Differences and Remote Sensing. Technical Working Group on Agricultural Greenhouse Gases (T-AGG): Experts Meeting, Chicago, Illinois: 22-23 April.
- West, T.O.**, V. Bandaru, C.C. Brandt, R. Perlack, C. Hellwinckel, D.G. De La Torre Ugarte, and R. Nelson. 2010. Potential legislative and economic impacts on cropland management and carbon dynamics in the United States. 2010 NASA Terrestrial Ecology Science Team Meeting. Scripps Seaside Forum, La Jolla, California: 15-17 March.
- West, T.O.**, V. Bandaru, C.C. Brandt, A.E. Schuh, K.R. Gurney, L.S. Heath, R.C. Izaurrealde, S. Liu, Z. Li, S.M. Ogle. 2009. Estimating carbon dioxide fluxes from sources and sinks in the mid-continent intensive using inventories and satellite remote sensing. 2009 AGU Fall Meeting, San Francisco: 14-18 December.
- West, T.O.** 2009. Integrative Framework for Estimating Available Cellulosic Feedstocks: National Field Trials, Remote Sensing, and Economic Projections. ASA/SSSA/CSA 2009 Annual Meeting. Pittsburgh, Pennsylvania: 1-5 November.
- West, T.O.**, K. Kline, C. Hellwinckel, L.M. Eaton, M.E. Downing, V.H. Dale, G.A. Oladosu. 2009. Energy inputs for 1<sup>st</sup> and 2<sup>nd</sup> generation ethanol feedstocks: Modeling effects of cultivation practices and crop selection on greenhouse gas emissions. Argonne National Laboratory, Argonne, Illinois: 20-21 October.
- West, T.O.**, V. Bandaru, G. Serbin, R. Hunt, and R.C. Izaurrealde. 2009. Using earth observations for ecological research: experiences, challenges, and future directions for agricultural applications. 2009 IEEE International Geoscience and Remote Sensing Symposium, Cape Town, South Africa: 13-17 July.
- West, T.O.** 2009. The Potential of Soil to Sequester Carbon. Workshop on Determination of Soil Organic Carbon in Agricultural Soils Spanning North America. NASA Jet Propulsion Laboratory, Pasadena, California: 26-28 May.
- West, T.O.**, V. Bandaru, and C. Brandt. 2009. Estimating Cropland Management and Biomass Feedstock Availability: Integrating Satellite Remote Sensing with Socio-economic Modeling. Special Session: Monitoring, Mapping, and Estimating the Bioenergy Domain. American Society of Photogrammetry and Remote Sensing 2009 Annual Conference. Baltimore Marriott Waterfront Hotel, Baltimore, Maryland: 9-13 March.
- West, T.O.** 2009. Inventory-based Carbon Budget for the MCI Interim Synthesis. 2<sup>nd</sup> NACP All-Investigators Meeting. Town and Country Inn, San Diego, California: 17-20 February.

- West, T.O.** 2009. Ecological and Geospatial Modeling for Sustainable Production of Biomass Energy Crops. University of Tennessee, Dougherty Hall: 20 January.
- West, T.O.,** C. Brandt, B. Perlack, M. Downing, D. De La Torre Ugarte, C. Hellwinckel, B. Wilson, J. Larson, and R. Nelson. 2008. Modeling and mapping land management and net carbon emissions: decision support for biofuels and carbon management on U.S. agricultural lands. NASA Carbon Cycle and Ecosystems Joint Science Workshop. University of Maryland Inn and Conference Center, Adelphi, Maryland: 28 April – 2 May. [poster]
- Doney, S., R. Birdsey, S. Goward, J. Sarmiento, D. Skole, **T. West.** 2008. Carbon management: overview of biotic approaches. NASA Carbon Cycle and Ecosystems Joint Science Workshop. University of Maryland Inn and Conference Center, Adelphi, Maryland: 28 April – 2 May.
- DeFries, R., **T. West,** J. Foley, B.L. Turner, G. Asner, C. Morton, D. Nepstad, E. Ellis. 2008. Land use choices: what have we learned and future challenges. NASA Carbon Cycle and Ecosystems Joint Science Workshop. University of Maryland Inn and Conference Center, Adelphi, Maryland: 28 April – 2 May.
- West, T.O.** 2008. Teacher Excellence AP Biology: Biogeochemistry Workshop. Institute for Secure and Sustainable Environment, University of Tennessee, Knoxville, Tennessee.
- West, T.O.,** C. Brandt, H. Jager, R. Perlack, L. Baskaran, A. Shamey. 2007. GIS-based biomass resource sustainability analysis. Feedstock Platform Portfolio Peer Review, Washington, D.C.: 21, August.
- West, T.O.** 2007. Regional agricultural inventory approaches: methods and applications. 2007 NCAR ASP Colloquium on Regional Biogeochemistry, Boulder, Colorado: 4-15 June.
- West, T.O.** 2007. Potential for use of geographical information systems in feedstock resource assessments. University of Maryland, Adelphi, Maryland: 3 May.
- West, T.O.** 2007. Combining remote sensing, inventory data, and economic modeling for spatial estimates of land management and carbon flux. Forestry and Agriculture Greenhouse Gas Modeling Forum. Shepherdstown, West Virginia: 5-8 March.
- West, T.O.** 2007. Spatial modeling of biomass feedstocks in the United States. Sun Grant Initiative, Regional Feedstock Partnerships, and GIS Coordination Meeting, Oak Ridge, Tennessee: 6 February.
- West, T.O.** 2007. Continental and regional observations and experiments: agricultural systems and land use. U.S. North American Carbon Program Investigators Meeting, Colorado Springs, Colorado: 22-27 January.
- West, T.O.** 2006. Spatially explicit full carbon and greenhouse gas accounting for the Midwestern and continental US: Modeling and decision support for carbon management. American Geophysical Union, San Francisco, California: 11-15 December.
- West, T.O.** 2006. Integration and analysis of spatial data for use in bioenergy projects. DOE EERE – Sun Grant Initiative meeting, Washington, D.C.: 5 December.
- West, T.O.** 2006. Carbon management in agricultural systems: integration of field measurements, inventory data, remote sensing, and agricultural economics. NASA Joint Workshop on Biodiversity, Terrestrial Ecology, and Related Applied Sciences. University of Maryland, Adelphi, Maryland: 21-25 August.
- West, T.O.,** C.C. Brandt, B.S. Wilson, C.M. Hellwinckel, M. Mueller, D.D. Tyler, D.G. De La Torre Ugarte, J.A. Larson, R.G. Nelson, G. Marland 2006. Estimating regional changes in soil carbon with high spatial resolution: Integrating field measurements, inventory data, and remote sensing products. NASA Joint Workshop on Biodiversity, Terrestrial Ecology, and Related Applied Sciences, Adelphi, Maryland: 21-25 August. [poster]
- West, T.O.** 2006. Developing bottom-up estimates of net carbon flux using inventory data, remote sensing, and economic modeling: A case study for agricultural lands in the US Mid-Continental Region. A workshop for the North American Carbon Program – Mid-Continental Intensive Campaign. Boulder, Colorado: 21-22 February.

- Sabesan, A., **West, T.O.**, Marland, G., Bhaduri, B. 2006. A spatial quantification of the lateral flow of carbon from U.S. agricultural lands. American Society for Photogrammetry and Remote Sensing, Reno Nevada, 1-5, May.
- McBride, A.C. and **T.O. West**. 2005. Estimating net CO<sub>2</sub> emissions from agricultural lime applied to soils. American Geophysical Union, San Francisco, California, 5-9, December. [poster]
- Sabesan, A., **T.O. West**, G. Marland, and B.L. Bhaduri. 2005. Lateral flow of carbon from U.S. agricultural lands: carbon uptake, consumption, and respiration. American Geophysical Union, San Francisco, California, 5-9, December.
- West, T.O.**, G. Marland, D. De La Torre Ugarte, J. Larson, C. Hellwinkle, and B. Wilson. 2005. Developing bottom-up estimates of net carbon flux using survey data and remote sensing: A case study of the U.S. mid-continental region. American Geophysical Union, San Francisco, California, 5-9, December.
- West, T.O.** 2004. Soil C steady state, interannual variation, and permanence: implications for a carbon sequestration implementation plan. Forestry and Agriculture Greenhouse Gas Modeling Forum. Sponsored by U.S. EPA, USDA-Forest Service, and Agri-Food Canada. National Conservation Training Center, Shepherdstown, West Virginia: 12-15 October.
- West, T.O.** 2004. Agricultural modeling of C fluxes and full C accounting. AmeriFlux Annual Science Team Meeting. Boulder, Colorado: 5-7 October.
- West, T.O.** 2004. Soil Carbon Sequestration: Capacity and Duration. NETL Third Annual Conference on Carbon Sequestration. Hilton Alexandria Mark Center, Alexandria, Virginia: 3-6 May.
- West, T.O.** 2004. Land Management and Soil Carbon Dynamics: Ecology of Terrestrial Carbon Sequestration. School of Natural Resources Winter 2004 Seminar Series, The Ohio State University, Columbus Ohio: 5 February.
- West, T.O.** 2004. Capacity and Duration of Carbon Sequestration in Agricultural Soils. A CASMGS Forum on Agriculture and Energy Partnerships for Using Soil Carbon Sequestration to Offset Greenhouse Gases. The George H. Bush Presidential Library Conference Center, College Station, Texas: 20-22 January.
- West, T.O.** 2003. Efficacy and Longevity of Varying Carbon Storage Practices. National Academies, Board on Agriculture and Natural Resources workshop on Direct and Indirect Human Contributions to Terrestrial Greenhouse Gas Fluxes. Keck Center of the National Academies, Washington, DC: 23-25 September.
- West, T.O.**, S.M. Ogle, W.M. Post, and K. Paustian. 2003. Estimates of Carbon Flux Following Changes in Land Management: Data Availability and Use. International Conference on Earth System Modelling. Hamburg, Germany: 15-19 September. [poster]
- West, T.O.**, G. Marland, and W.M. Post. 2002. Elements of a Credible Accounting System for Sequestering Carbon in Soil. ASA-CSSA-SSSA Annual Meeting. Indianapolis, Indiana: 10-14 November.
- West, T.O.**, W.M. Post, G. Marland, and A.W. King. 2002. Carbon Management Curves: Estimates of Temporal Soil Carbon Dynamics. USDA Symposium on Natural Resource Management to Offset Greenhouse Gas Emissions. Raleigh, North Carolina: 19-21 November.
- West, T.O.** Soil Carbon Accounting: Options to Measure, Monitor, and Address Project-Level Issues. 2002. US EPA Forestry & Agriculture Greenhouse Gas Modeling Forum. Shephardstown, West Virginia: 8-11 October.
- West, T.O.** and W.M. Post. 2001. Effects of Tillage and Crop Rotation on Carbon Sequestration Rates. ASA-CSSA-SSSA Annual Meeting. Charlotte, North Carolina: 21-25 October.
- West, T. O.** 2001. Estimating the Overall Impact of a Change in Agricultural Practices on Net C<sub>eq</sub> Flux to the Atmosphere. First National Conference on Carbon Sequestration. Washington, DC: 15-17 May.

- West, T. O.** 2001. The Overall Impact of U.S. Agriculture on Atmospheric CO<sub>2</sub>—Including a brief introduction to the Department of Energy Center for Enhancing Carbon Sequestration in Terrestrial Ecosystems (CSiTE). University of Kentucky, Soil Science Guest Seminar Series. Lexington, Kentucky: 2 April.
- West, T.O.** and G. Marland. 2000. Full Carbon Cycle Analysis in Agriculture: Balancing Carbon Emissions, Carbon Sequestration, and Agricultural Productivity. American Geophysical Union 2000 Fall Meeting. San Francisco, California: December 15-19.
- West, T.O.** 2000. Net Carbon Flux from Agricultural Ecosystems: Methodology for Full Carbon Cycle Analyses. Advances in Terrestrial Ecosystem Carbon Inventory, Measurements and Monitoring. Raleigh, North Carolina: 3-5 October.
- West, T.O.** 2000. Net Carbon Sequestration in Agriculture: A National Assessment. Conference of the International Energy Foundation. Las Vegas, Nevada: 23-28 July.
- West, T. O.** 2000. Carbon Sequestration in Terrestrial Ecosystems: Preliminary Results from Tasks 2.1 and 2.2. International Energy Agency, Zagreb, Croatia: 22-26 May.
- West, T.O.** and M.K. Wali. 1998. The Usefulness of Soil Erosion Models in Ecosystem Rehabilitation. VII International Congress of Ecology INTECOL. Florence, Italy: 19-25 July.
- West, T.O.,** M.K. Wali, S.E. Watts, C. McDonald, and D. Pant. 1997. Modeling the Carbon and Nitrogen Budgets of Diverse Ohio Land Use Types. Growth and the Future: A Land Use Conference for all of Ohio. Columbus, Ohio: 25-26 March.