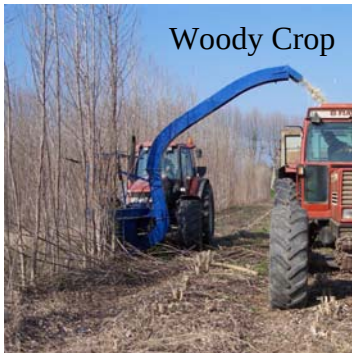
Annual Meetings September 2007

AERC Congressional Briefing and Symposium
Ecosystem Science: Informing a Sound Bioenergy Policy

AERC hit a hot topic in Washington DC, presenting a congressional briefing and a symposium on bioenergy on September 27, 2007. The briefing at the Rayburn House Office Building attracted a crowd of policy makers, congressional staffers, and agency officials to hear experts address aspects of the sustainability of bioenergy (see news reports in *BioScience* 57:904 and 57:928).

Robin Graham of Oak Ridge National Laboratory presented a primer on the sustainability bioenergy feedstocks, the raw material of biofuels that currently meet 3.4% of our nation's energy demand. She compared the types of feedstocks including crop residues like corn stover, perennial grasses like switchgrass, and short-rotation tree crops like poplar. Then she outlined the dimensions of sustainability that must be considered if we are to increase the role of biofuels.


Woody Crop

Carl Trettin of the US Forest Service discussed short-rotation woody crops in more detail, featuring research results that show decreases in overland flow, surface runoff, and nitrogen discharge with conversion of row crops to woody crops.

Jane Johnson of the USDA Agricultural Research Service talked about the trade-offs of using corn stover as a biofuel feedstock. She stressed that the benefits harvesting crop residues for bioenergy must be carefully balanced against the benefits of leaving the residues to maintain soil organic carbon and to reduce erosion.


Switchgrass

JoAnn Hanowski of the University of Minnesota-Duluth's Natural Resources Research Institute focused on feedstock production strategies that maximize wildlife habitat quality. For example, ideal strategies would maintain conservation reserve program acreage, avoid planting woody energy crops in open habitats, plant switchgrass mixes as energy crops to provide better wildlife habitat than monoculture, and incorporate brush harvest for biofuel in managing sites for open-country wildlife species.

Stephen Polasky of the University of Minnesota concluded the briefing by comparing the bioeconomics of corn grain ethanol, soybean biodiesel, and cellulosic ethanol as biofuels. He demonstrated that corn grain ethanol produces small net energy yields at steep environmental costs. Although his balance sheet for soybean biodiesel was better, he noted that neither of these first-generation food-based biofuels could supply a large percentage of US energy demands. In contrast, he suggested that second-generation cellulosic ethanol biofuels derived from prairie grasses have the potential of higher net energy yields and possible environmental benefits.

After the congressional briefing, the same speakers presented more detailed talks at a symposium held at the Smithsonian Institution. The symposium was attended by representatives of AERC member organizations from around the US and by staff from Washington DC agencies such as NSF, EPA, USDA, and DOE. Less formal discussions continued during the luncheon at the symposium and during the reception that followed the symposium.

The 2007 briefing and symposium presentations are posted on the updated AERC website at **www.ecosystemreseach.org,** as are the presentations from the 2006 congressional briefing and symposium, which focused on ecological tipping points associated with global climate change.

AERC Council Meeting

The AERC Council Meeting was held at the Smithsonian Institution on September 28, 2007 with the AERC officers and representatives of several member organizations present. Major items of business included revising the AERC constitution to change presidential terms from one to two years and increasing annual dues from $400 to $500.

New Member Organizations

AERC welcomes two new member organizations: **The Yellowstone Ecological Research Center**, http://www.yellowstoneresearch.org/, and the **Harvard Forest**, http://harvardforest.fas.harvard.edu/**.** These vibrant centers for ecosystem research join more than 40 other AERC member organizations.

Member News

The Savannah River Ecology Laboratory (SREL) is transitioning to a new operating model as explained in the memo at http://www.uga.edu/srel/SRELfuture.htm. SREL seeks partnerships with other colleges, universities, and research institutions to help shape and achieve its new vision.

Future AERC Events

The next annual meetings of AERC are scheduled for September 25-26, 2008. These will include the council meeting and another congressional briefing and symposium along the lines of our recent successful meetings. The symposium will be held at the Smithsonian. We are considering offering some AERC support for graduate student attendance. For 2008, we have chosen a symposium theme that will highlight the value of ecosystem research and resonate with national policy makers: We will focus on the potential of carbon sequestration by ecosystems, comparing major ecosystem types from forests to ocean ecosystems.

The mission of the Association of Ecosystem Research Centers is to promote the use of ecosystem science to address environmental problems. AERC advocates support for ecosystem-scale research, provides information for scientists and policy makers, promotes training opportunities in ecosystem studies, and fosters collaboration among member institutions.