

Preface

Max Schnepf

In January 2007, the Soil and Water Conservation Society (SWCS) completed work on a book summarizing what the scientific literature tells us about the environmental effects of applying individual conservation practices on cropland. *Environmental Benefits of Conservation on Cropland: The Status of Our Knowledge* was assembled at the request of U.S. Department of Agriculture (USDA) officials involved in the Conservation Effects Assessment Project (CEAP) initiative. Work on that book in late 2005 and early 2006 prompted discussion about what could be done by conservation researchers to extend the effort to quantify the environmental benefits of applying conservation practices on agricultural land beyond the field and farm scales—the focal point of most research in recent decades.

Subsequent discussion with USDA and other scientists led to the suggestion that SWCS plan a workshop on how to strengthen the science and account for the environmental benefits of conservation efforts on agricultural land at landscape and watershed scales. During the course of those discussions, which took place over several months' time, four recurring themes emerged. Those four themes ultimately provided the framework for an international workshop—“Managing Agricultural Landscapes for Environmental Quality, Strengthening the Science Base”—

that was held October 11–13, 2006, in Kansas City, Missouri. The themes were as follows:

1. What should we measure, and how, to account for environmental effects at landscape and watershed scales?
2. Methods for environmental management research at landscape and watershed scales.
3. The science of targeting within landscapes and watersheds to improve conservation effectiveness.
4. Realistic expectations about the timing between conservation implementation and environmental effects—lessons learned from long-term research (or what scale of change is possible over what period of time).

From the outset, the emphasis was on planning a multidisciplinary workshop in an attempt to assess what science has to tell us about applying conservation more effectively and efficiently on a landscape or watershed scale—beyond the usual research plot, field, or farm scale—and what the implications of that might be for strengthening the science through research and extension in the future. A secondary objective of the workshop was to expose the scientific community to the needs and expectations of conservation policymakers and practitioners struggling to account for the environmental benefits of projects intended to enhance soil, water, air, and habitat at broader geographic scales.

To set the stage for discussion at the workshop, SWCS commissioned the preparation of a paper for presentation at the workshop on each of the four aforementioned themes. A lead author was invited to write each paper in collaboration with a multidisciplinary team of physical and social scientists. Two additional individuals were then invited to present “value-added” perspectives on each of the four themes at the workshop. Drafts of the four commissioned papers were shared with these eight perspective presenters in advance of the workshop.

To extend the discussion about strengthening the science of conservation at landscape and watershed scales during the workshop, SWCS also issued a call for oral papers and poster papers. The emphasis in this call for papers was on research and experience at landscape and watershed scales or work that had application at these scales. More than 250 proposals were ultimately submitted. About 110 of these were

selected for oral presentation; another 80 were chosen as posters.

This book contains the four commissioned papers, along with the two perspective presentations that accompanied each (save for one paper in the research methods segment that was not available for publication). A fifth part of the book features comments offered by conservation policymakers and practitioners—users of research—on what they would like in the way of new information from the research community.

A short “Roundtable” section follows each of the four commissioned papers in this book. These sections summarize four roundtable discussions held one evening during the workshop. The roundtables involved the speakers from each of the four themed sessions and workshop participants, who attended the roundtable of their choice. In addition to giving speakers and workshop participants an opportunity to elaborate on what was said during the formal sessions at the workshop, roundtable participants were asked to identify what they considered to be the five most important “next steps” that might be taken to strengthen the science surrounding each particular theme.

Prior to the workshop, a decision was made not to publish the oral and poster papers from the workshop’s technical sessions in this book, but rather post those made available by the presenters on the SWCS website after the fact. Most of those presentations are available at www.swcs.org. The workshop program also is available at this site.

Any number of individuals and institutions deserve thanks for their contributions to and support of this event. Nine governmental agencies supported the workshop and publication of this book financially: Agricultural Research Service; Agriculture and Agri-Food Canada; Cooperative State Research, Education and Extension Service; Economic Research Service; Farm Service Agency;

Natural Resources Conservation Service; U.S. Fish and Wildlife Service; U.S. Forest Service; and U.S. Geological Survey. The International Cooperation Office of the Mexico National Institute for Forestry, Agriculture and Animal Husbandry Research lent its name to the list of workshop sponsors. Dozens of individuals served on the technical committee that laid the groundwork for the workshop, on the program committee that helped establish the workshop format, and on the abstract review committee. Many of these same individuals and others served as session moderators during the workshop. Special thanks are due Mike Burkart and Cathy Kling, Iowa State University, who helped SWCS staff members formulate an initial plan for the workshop and Peter Groffman, Institute of Ecosystem Studies, who served as chair of the program committee.

Many farmers and ranchers work hard to conserve soil, water, air, and fish and wildlife resources within the confines of their individual agricultural enterprises. But many of society’s environmental management goals require the collective action of producers across multiple farm or ranch units to achieve the critical mass of conservation action needed to make a difference in soil, water, and air quality; water conservation; and improved habitat for both fish and wildlife. This fact presents a significant challenge to researchers who must think about what research they conduct, and how, to help conservation policymakers and practitioners better serve their constituents and the environment. Likewise, this fact challenges conservation policymakers and practitioners to demand more of the research community in the ongoing effort to improve the efficacy and efficiency of conservation policy and programs. Hopefully, the Kansas City workshop moved thinking in each of these communities a step beyond where it has been.